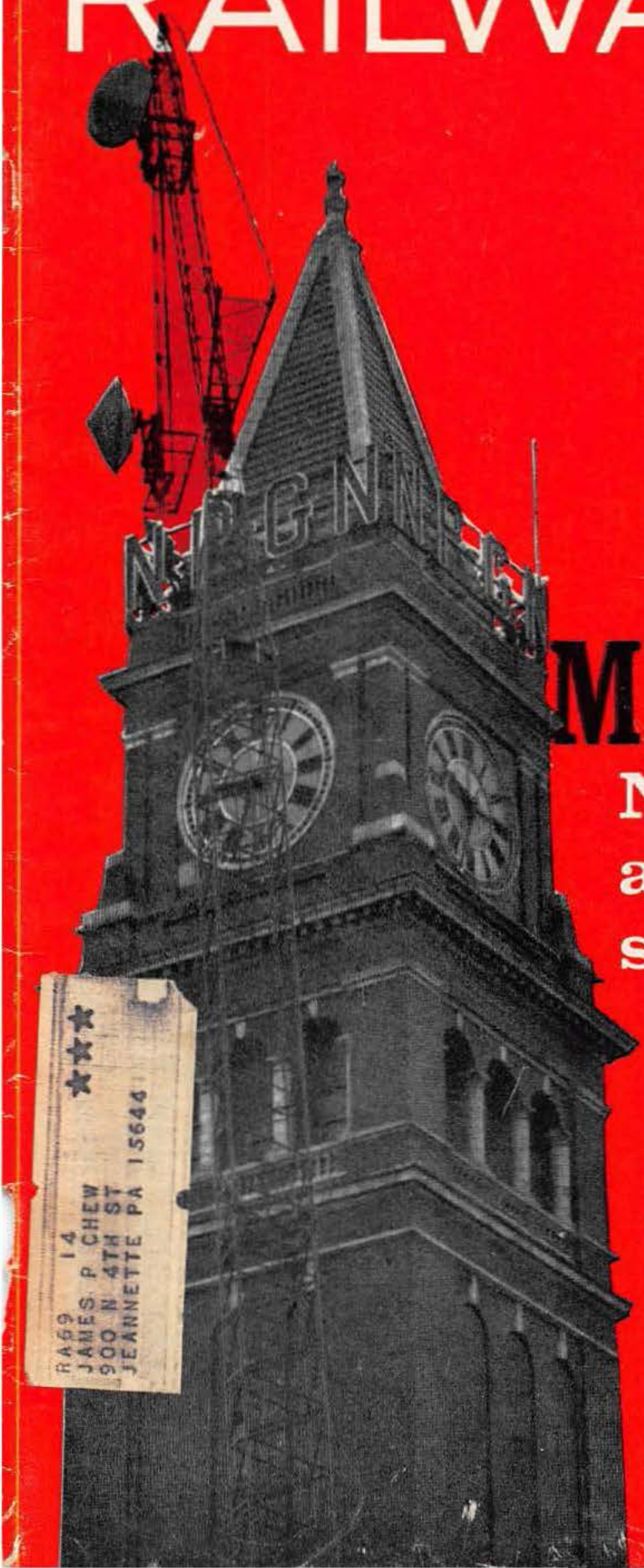
C&NW PUTS MUSCLE IN NEW ORE TERMINAL

December 16, 1968

RAILWAY AGE

THE TRANSPORTATION WEEKLY



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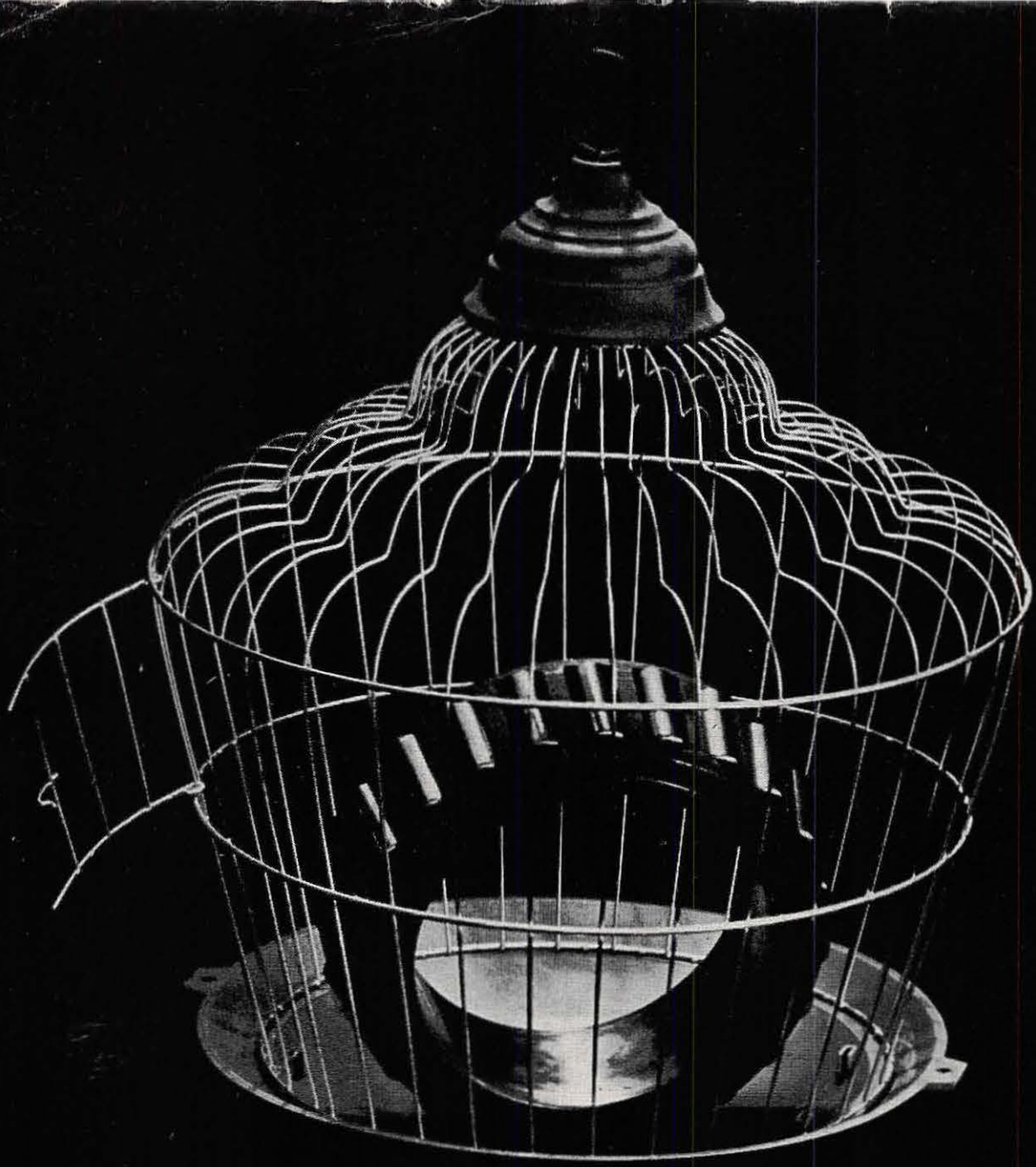

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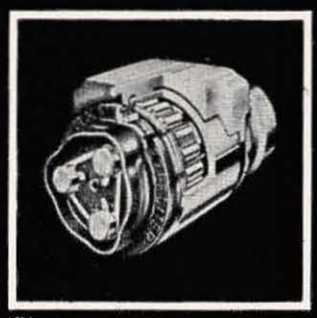

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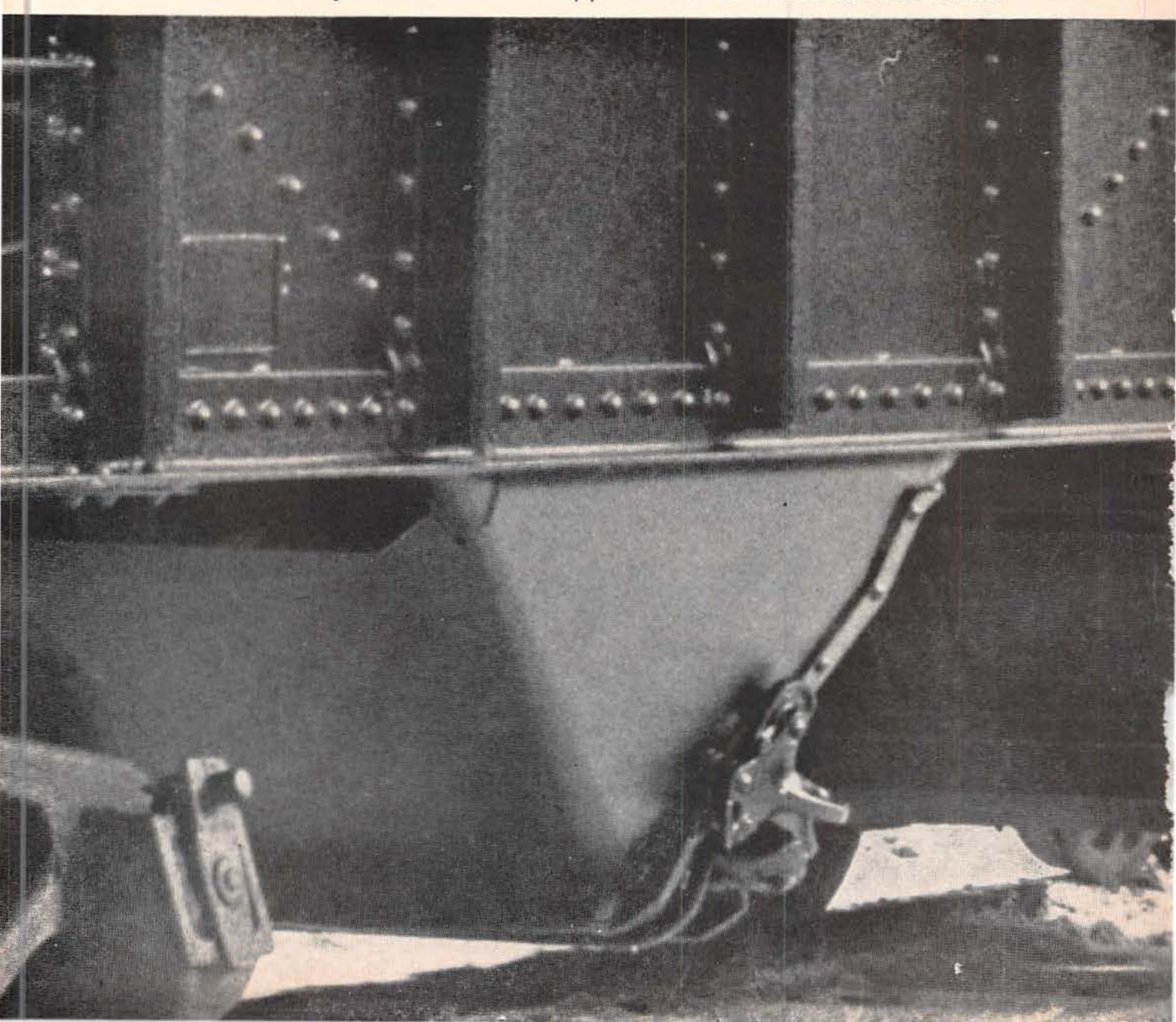

RAILWAY AGE

Dec. 16, 1968 • Vol. 165, No. 24

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...AND COMING NEXT WEEK

How is 1969 shaping up in terms of traffic? In the Dec. 23/30 issue of Railway Age (a two-in-one issue which will be mailed Dec. 27), major shippers talk about their anticipated traffic—and how much of it is likely to go to rails. Also: How the SCL is doing with its LCL business . . . . and why one shipper switched from trucks to piggyback. This issue, like all Freight Traffic issues of Railway Age, will go to 10,000 industrial traffic managers as well as the regular subscription list.

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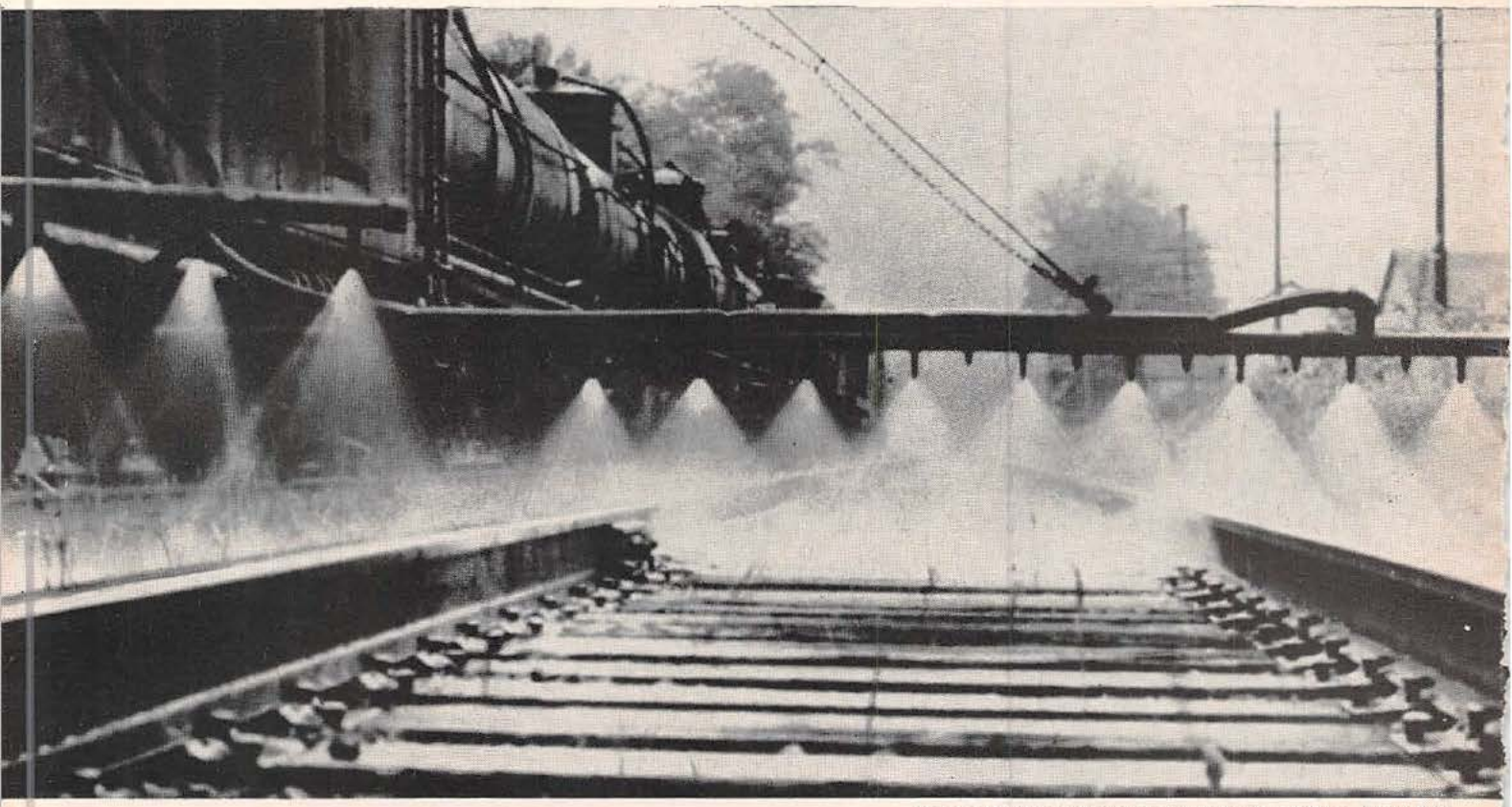

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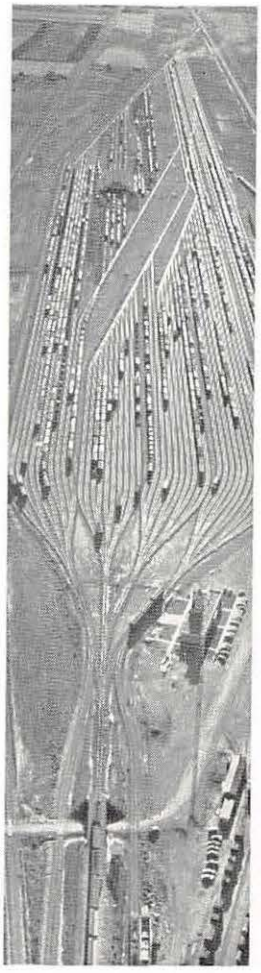

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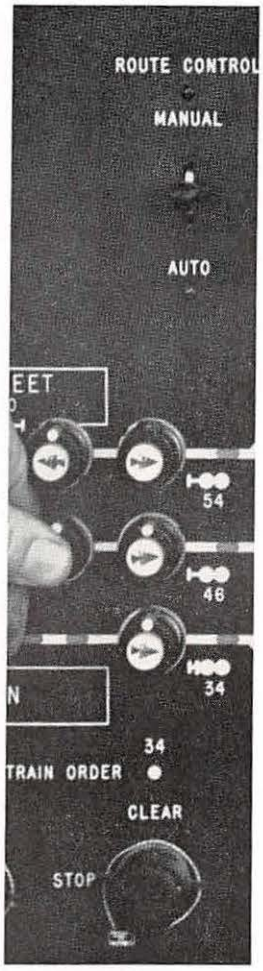

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Our involvement in urban transportation is nationwide—and overseas too. Recent GRS developments include electronic detection and communication systems transmitted through the rails, without needing special rail joints. Onboard computers smooth out starts, stops, and speed changes. Electronic identity systems route trains automatically.

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Electronic train control reinforces the operator's ability, gives him confidence to proceed at maximum authorized speed, regardless of visibility. Onboard signals increase average speeds because they permit the operator to resume a higher speed immediately—without waiting to reach the next trackside signal.

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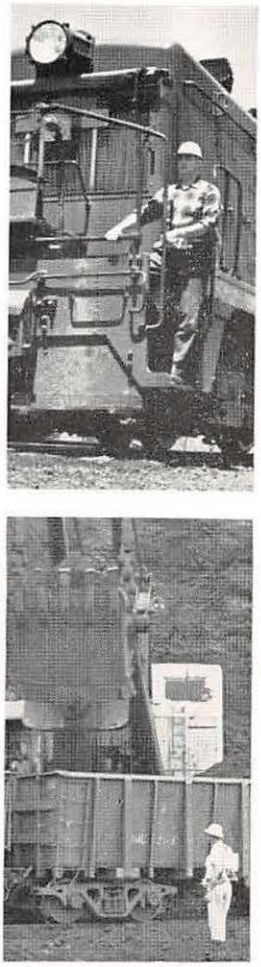

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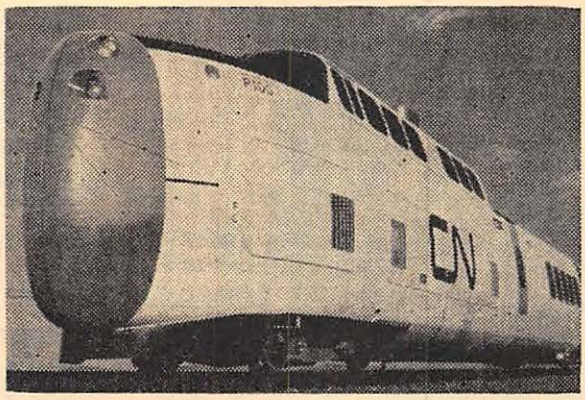
MONDAY MORNING REPORT



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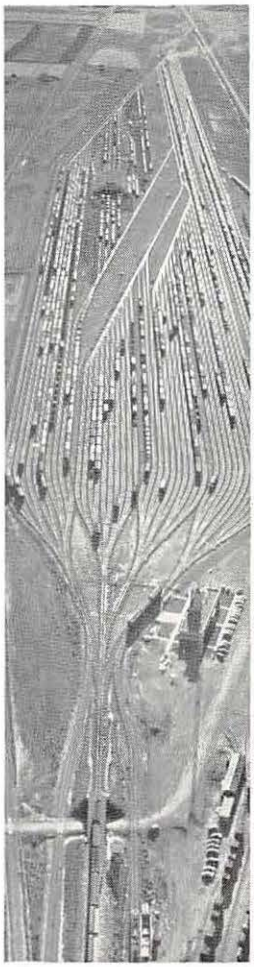

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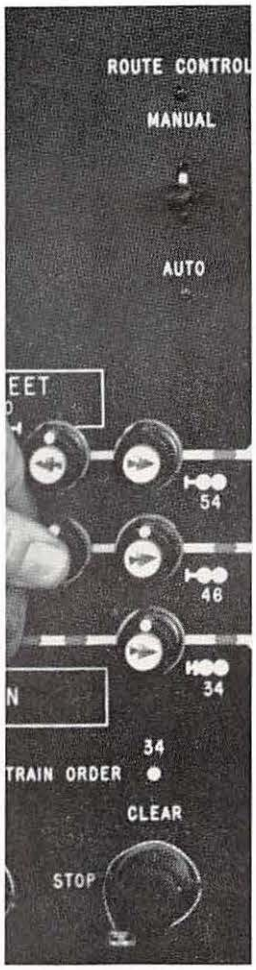

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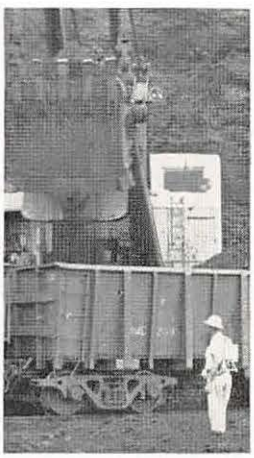

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SHORT AND SIGNIFICANT

Alberta line now set for May opening

The new Alberta Resources Railway, stretching 235 miles from a point west of Hinton to Grande Prairie, is rapidly nearing completion. Most of the rail has been laid, although ballasting cannot begin until next spring. Work was scheduled to start this month on Grande Prairie yard tracks. The opening of the line is set for May. Unexpected delays prevented a planned inaugural this fall. A Northwest Resources Conference will be held in connection with the opening.

Truck tonnage drops below previous week

Intercity truck tonnage in the week ended Nov. 30 was 16.7% below that of the preceding week, which included the Thanksgiving Day holiday, according to American Trucking Associations. Tonnage in the week ended Nov. 30 was 9.5% below the volume in the corresponding 1967 week, which also included the holiday.

Japan ponders abandonment of some rail lines

The deficit-plagued Japanese National Railways may be forced to abandon some 1,600 miles of lightly-patronized local lines. The JNR Advisory Committee has proposed that this be done and that traffic now moving on these lines be handled by bus and truck. The saving to the JNR is estimated at $833 million over the next 10 years, and $2.6 billion over a 20-year period. These savings, says the Advisory Committee, "could be used as funds for the modernization of railway equipment and facilities to the benefit of the people"—specifically, more new services such as those now provided by the New Tokaido Line.

Highway rigs getting bigger, survey shows

A Truck Trailer Manufacturers Association survey underscores the trend toward bigger motor-carrier rigs. The survey shows that in 1968, 64.5% of all trailers built have been in the length range of 40 feet to 42½ feet. In 1960, trailers of this length accounted for one tenth of 1% of all production. Second most popular piece of new motor-carrier equipment this year has been the double-bottom trailer, ranging from 26 to 28 feet in length and accounting for 19.8%, compared with 6.4% in 1960.

Equipment paper sold by N&W at 6-5/8%

Norfolk & Western has awarded $9,300,000 of equipment trust certificates, bearing dividends at the rate of 6⅝% a year, to a Salomon Brothers & Hutzler group, subject to ICC approval. The price of the successful bid was 98.576% of par, an average interest cost of 6.874%. A bid was also received from a Halsey, Stuart & Co., Inc., group at 98.78% of par for certificates bearing dividends at the rate of 7%, according to an announcement by the railroad.

IC spending: down, but it may go up again

Illinois Central, a heavy spender for capital projects over the past several years, may not be in 1969—but then again, it may be. IC's "phase one" program totals just $23 million in capital expenditures, for what the road terms "those projects needed to keep the property in good operating condition." In 1968, IC is spending approximately $68 million. The '69 figure, however, is almost certain to go up, in the wake of the ICC's approval of freight rate increases—though preliminary estimates don't make IC look like a big gainer from the increases. Half, or more, of the $23 million now authorized will be spent for fixed-plant improvements, including a substantial amount of bridge work, installation of welded rail and communications-system improvements. IC has placed material orders amounting to about $6 million for company-shop construction of 600 100-ton open-top hopper cars. About $5.5 million has been authorized for freight-car and locomotive upgrading and improvement.

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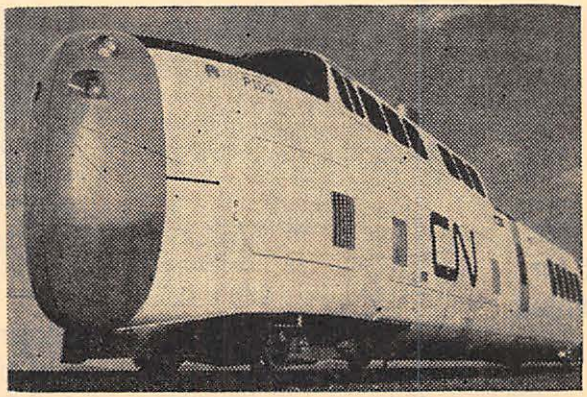

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GUS WELTY

LINES ON LABOR

IT WAS A UNIQUE EXPERIENCE for this generation of railroad men. There they were, top representatives of four major operating unions, doing something which hadn't been done in the railroad industry in more than 40 years: They were announcing the formation of a new rail labor organization.

THEY CAME TO CHICAGO to announce the long-heralded creation of the United Transportation Union and to bring together under one banner all railroad operating employees except locomotive engineers. UTU will embrace the Brotherhood of Railroad Trainmen, the Brotherhood of Locomotive Firemen & Enginemen, the Order of Railway Conductors & Brakemen, the Switchmen's Union of North America. UTU, by any standard, is a major accomplishment—one for which officers and rank-and-file alike deserve full credit.

FIRST, the officers had to approve unification—and these were men who fought each other as often as they cooperated with each other. Then, the individual members had to make their decision in a referendum completed little more than a week ago.

FOR INDIVIDUALS, TOO, there were old rivalries to put down, old traditions to overcome. There had been fears that the small unions in particular—ORC&B and SUNA—might rebel. They didn't. About 69% of SUNA's sometimes-fractious switchmen said OK to merger. ORC&B counted more than 75% in favor. Unification goes through.

FOR UTU'S FIRST PRESIDENT, present BRT Chief Charles Luna, and his top assistants (presidents of the other three organizations), there will be tough times still ahead. These are old and proud organizations. The junior member of the group, SUNA, can date its history back to the 1890's. But there is a suspicion that UTU will succeed, where past moves toward merger have failed. Today's union man is a younger man. He has, perhaps, a greater regard for economics than for tradition. He is neither patient with nor proud of the old ways of doing things. He is not to be taken for granted by anybody—including the incoming leaders of UTU.

WITHOUT ANY DOUBT, UTU will be a force in the industry. Hopefully, it will be a force for good *for* the industry and its people. President Luna is saying the right things—things like: "We feel this move [unification] will enable the railroad man to enjoy a good income and to have self respect in his industry. We need a growing industry, and we intend to devote ourselves to that end."

Three railroads join to provide Kaiser unit train

Steel mills have a heavy appetite for coal—and Kaiser Steel's complex at Fontana, Calif., is certainly no exception. Two years ago, Santa Fe began unit-train operations to bring 700,000 tons of New Mexico bituminous to Fontana each year (RA, Oct. 10, 1966, p. 16). And now, Rio Grande, Union Pacific and Santa Fe are opening up another unit-train service which will feed 700,000 tons per year of Utah coal to the mills.

Santa Fe's unit-train involved construction of a new piece of railroad, the 38-mile York Canyon Line branching from the ATSF main at French, N.M. The D&RGW-UP-ATSF operation required only a new two-and-a-half-mile Rio Grande connection to reach Kaiser's new mining and loading facilities at Sunnyside, Utah.

The new trains will operate 336 days a year—virtually continuous movement except for time off for miners' holidays and vacations. Each train will handle 8,400 tons of coal over the 806-mile run, and each movement will be on a 96-hour cycle, mine to mill and return.

Coal has been moving from Utah to Fontana, but inauguration of unit-train service over the full route, the railroads say, will result in lowered transportation costs, plus improved dependability in coal supply and improved utilization of manpower and equipment.

Rio Grande takes the coal from origin to Provo, Utah, Union Pacific runs it to Barstow, Calif., and Santa Fe takes over for the last leg of the movement to Fontana.

Power is supplied by four 3,600-hp SD-45 units with D&RGW and UP each putting two units in the pool. Orders have been placed for 100-ton hopper cars for the train, but for the time being it is being operated with leased equipment.

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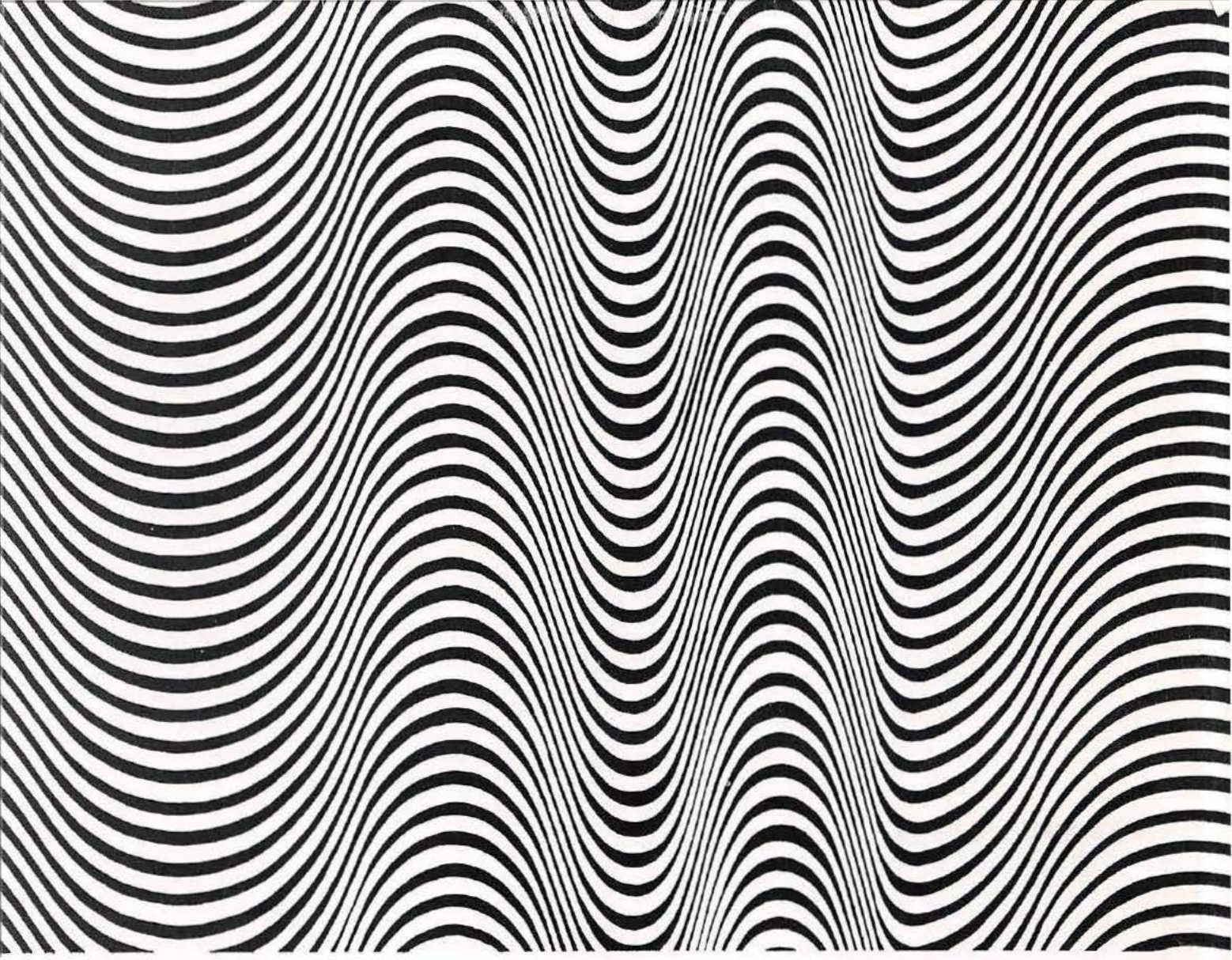

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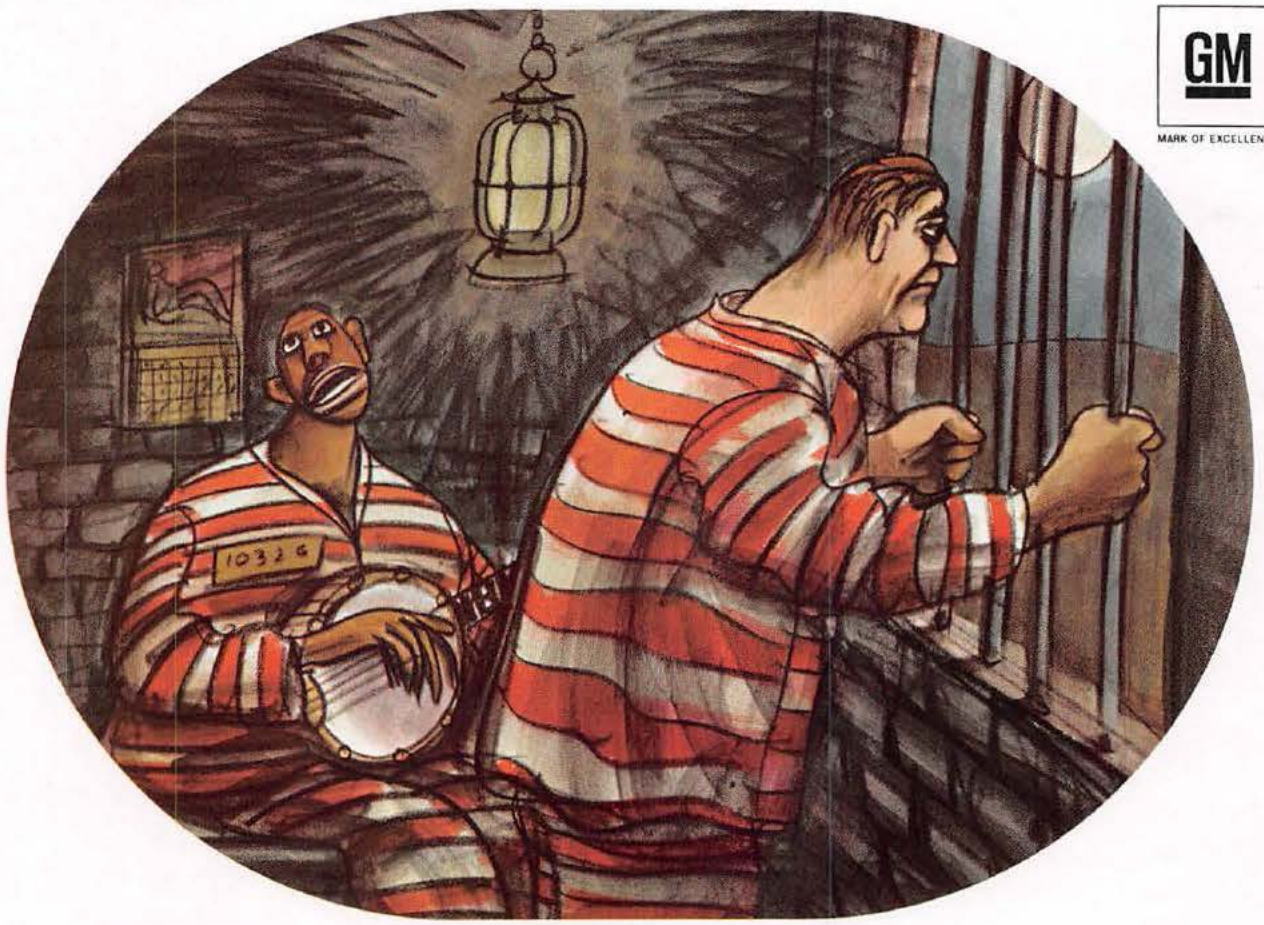

MIDNIGHT SPECIAL

Like most folk songs, this famous old Southern prison ballad comes in countless versions. But they all share the plaintive chorus which refers to a fabled train with a special mission for prisoners. If the light of the Midnight Special cast its beam on a man behind bars, that man was bound to go free. To this day, when Southern prisoners hear a train whistle, they hope against hope for a saving flash of light.

Let the Midnight Special
Shine her light on me.
Oh let the Midnight Special
Shine her ever lovin' light on me.
Yonder comes Miss Judy.
How in the world do you know?
I know her by her apron and
The dress she wore,
Umbrella on her shoulder,
Piece of paper in her hand.
She's goin' to the gov-nor,
Says "I want my man."
Oh let the Midnight Special
Shine her light on me.
Oh let the Midnight Special
Shine her ever lovin' light on me.

Well Judy said she loved me,
But I believe she told a lie,
'Cause she hasn't been to see me
Since the Fourth of July.
She brought me little coffee,
She brought me little tea,
She brought me nearly everything
'Cept the thing I need.
Oh let the Midnight Special
Shine her light on me.
Oh let the Midnight Special
Shine her ever lovin' light on me.
Oh let the Midnight Special
Shine her light on me.
Oh let the Midnight Special
Shine her ever lovin' light on me.

GM
MARK OF EXCELLENCE

Songs like "Midnight Special" are part of that vanished era when the clackety-clack of a seemingly endless chain of cars beckoned you to far-away places.

Today's Diesels with their deep-throated call still stir the wanderlust; and modernized railroads continue to symbolize an active and vigorous nation.

New Departure-Hyatt is proud to have played its part in the railroads' progress. Highly sophisticated advances in bearing design and manufacturing, now in the developmental stages at NDH, will lend themselves to a future of even greater industry efficiency.

If you'd like a full-color reproduction of this advertisement (without commercial message) to frame for your office, just let us know. We'll be happy to send it to you.

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Division of General Motors Corporation, Sandusky, Ohio 44870

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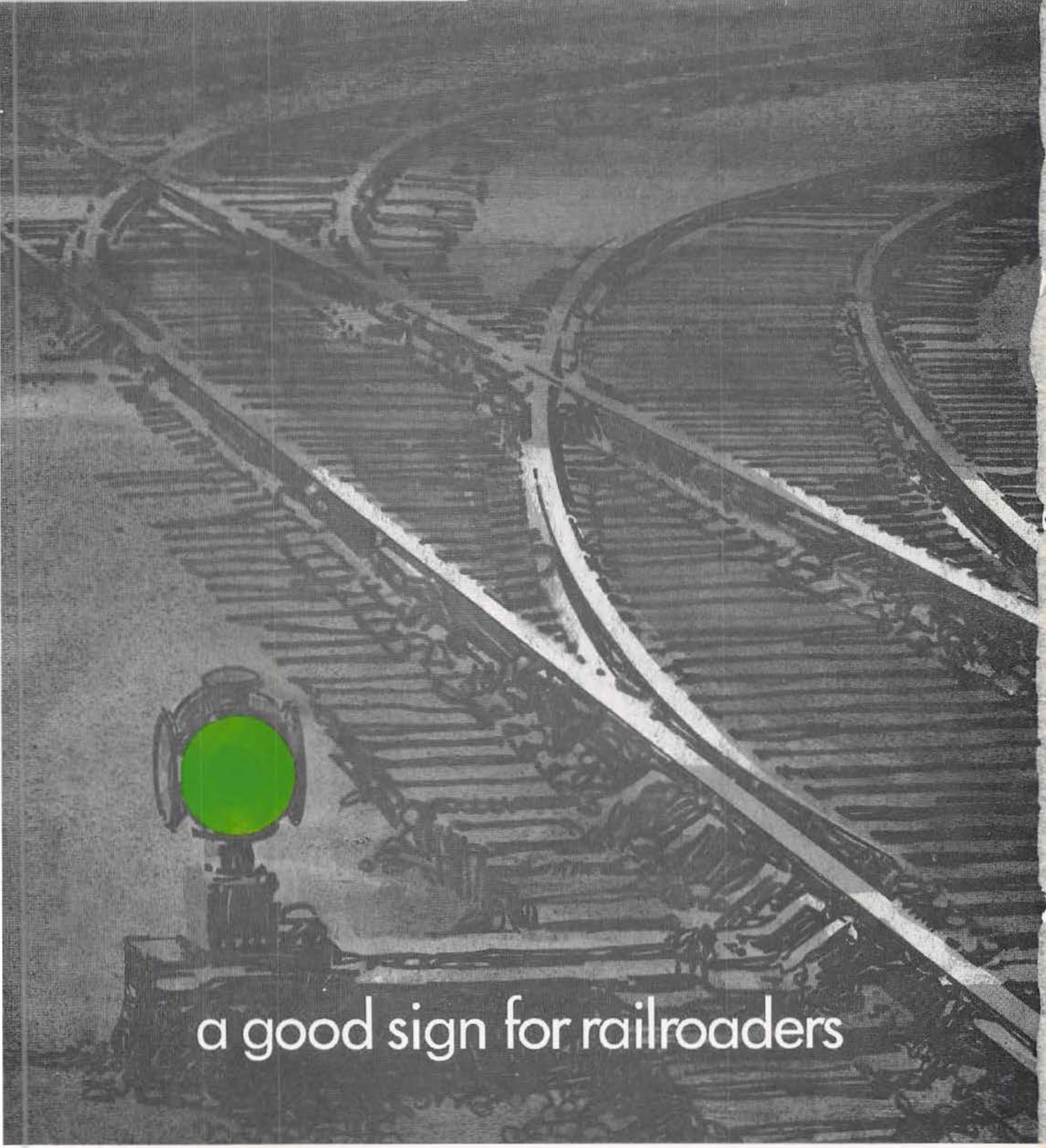


Whether it's in the switching yard or on an open stretch of track, a green light on a switch spells out a good sign for any railroader. And the familiar Edgewater (E) on wrought steel wheels tells a railroader he's equipped with the most dependable wheels for his rolling stock.

Edgewater wrought steel wheels give you extra service because they're made by a highly developed forging and rolling technique. The metal's tough and dense, providing the all-important stamina to withstand today's heavier loads and higher speeds. Edgewater Corporation, P.O. Box 478, Pittsburgh, Pa.15230.

when you want the highest quality steel wheels, rely on this sign

WEEK AT A GLANCE

Commerce survey sees 20% jump in rail spending

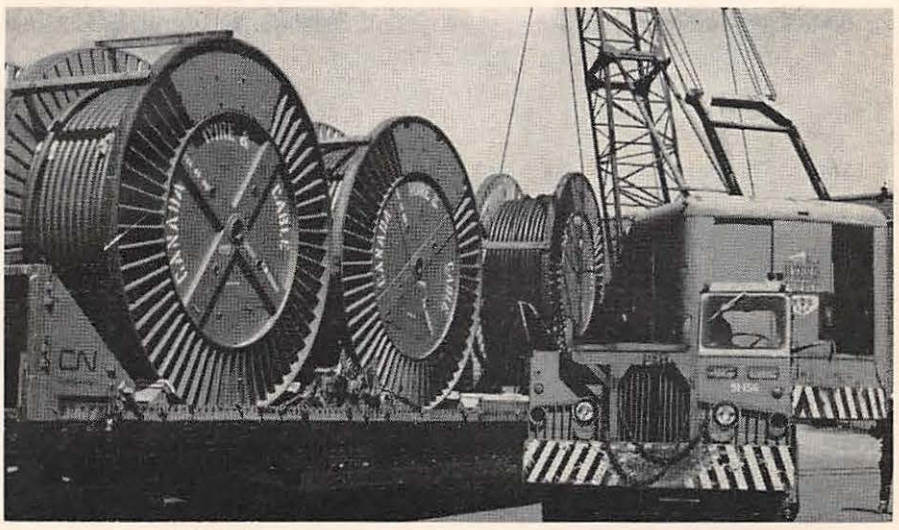
A survey conducted by the Department of Commerce and the Securities and Exchange Commission in late October and November finds that railroads plan to spend 20% more on new plant and equipment in the first half of 1969 than they spent in the last half of 1968. In first-quarter 1969, according to this forecast, railroads will spend $410 million on capital inprovements. Based on past spending patterns, this would be at an annual rate of $1.8 billion. Actual first quarter spending in recent years was: 1966, $400 million; 1967, $410 million; 1968, $370 million. As for total railroad capital spending in 1968, the Commerce-SEC survey figure is $1.51 billion, down 1.6% from 1967's $1.53 billion and 22.4% below 1966's all-time high of $1.98 billion. The Interstate Commerce Commission, however, now estimates 1968 railroad spending at $1.3 billion, which is close to the figure railroads used to support their recently-granted plea for a freight-rate increase. Of this total, the ICC estimates that $850.8 million has been spent for new cars and locomotives, 23.4% less than in 1967; while road expenditures have risen by 12.4% to $404.1 million.

IC and Abex shareholders okay merger

Shareholders of Illinois Central Industries and Abex Corp. have overwhelmingly approved combination of the two companies. At special meetings in Chicago and New York, 87.7% of Industries shares were voted, with 99.8% favoring the proposal; and 85.5% of Abex shares were voted, with 98.5% in the yes column. Industries President William B. Johnson commented: "Abex already is a substantially diversified company. While Illinois Central Industries is actively seeking diversification in the general industrial field, as well as in real estate development, the combination should further level out the cyclical swings of the past, and give our new company a steadier income base." Abex would become a subsidiary of ICI.

Marketing: A three-way deal

Penn Central President Alfred E. Perlman, widely recognized as one of the most marketing-minded men in the railroad business, last week pinpointed what he considers to be marketing's three essential ingredients: (1) A "total corporate commitment" under which the marketing function requires full participation at the mechanical, operational, legal, financial, informational and sales levels; (2) working out a "realistic understanding of customers' true needs and making a systematic effort to customize rail transportation to fit these particular logistics requirements"; and (3) satisfying these needs at a profit. Said Perlman, addressing the Toronto Railway Club: "Our profitability depends ultimately upon whether our customers can make money themselves by doing business with us, and our greater efficiency can contribute directly to this result."



New car reels in traffic for CN

By converting 22 flat cars to "reelcars" (above), Canadian National has won a 50% increase in wire-and-cable traffic. CN says the modified, specialized cars have cut loading costs by 80%, unloading costs by 50% and carry up to twice the load of a box car. Shop crews at Montreal and Edmonton did the conversion work. Canada Wire & Cable Ltd. (Toronto) uses the cars for heavy shipments (60,000 to 165,000 pounds) to Quebec and Alberta points.

GUS WELTY

LINES ON LABOR

IT WAS A UNIQUE EXPERIENCE for this generation of railroad men. There they were, top representatives of four major operating unions, doing something which hadn't been done in the railroad industry in more than 40 years: They were announcing the formation of a new rail labor organization.

THEY CAME TO CHICAGO to announce the long-heralded creation of the United Transportation Union and to bring together under one banner all railroad operating employees except locomotive engineers. UTU will embrace the Brotherhood of Railroad Trainmen, the Brotherhood of Locomotive Firemen & Enginemen, the Order of Railway Conductors & Brakemen, the Switchmen's Union of North America. UTU, by any standard, is a major accomplishment—one for which officers and rank-and-file alike deserve full credit.

FIRST, the officers had to approve unification—and these were men who fought each other as often as they cooperated with each other. Then, the individual members had to make their decision in a referendum completed little more than a week ago.

FOR INDIVIDUALS, TOO, there were old rivalries to put down, old traditions to overcome. There had been fears that the small unions in particular—ORC&B and SUNA—might rebel. They didn't. About 69% of SUNA's sometimes-fractious switchmen said OK to merger. ORC&B counted more than 75% in favor. Unification goes through.

FOR UTU'S FIRST PRESIDENT, present BRT Chief Charles Luna, and his top assistants (presidents of the other three organizations), there will be tough times still ahead. These are old and proud organizations. The junior member of the group, SUNA, can date its history back to the 1890's. But there is a suspicion that UTU will succeed, where past moves toward merger have failed. Today's union man is a younger man. He has, perhaps, a greater regard for economics than for tradition. He is neither patient with nor proud of the old ways of doing things. He is not to be taken for granted by anybody—including the incoming leaders of UTU.

WITHOUT ANY DOUBT, UTU will be a force in the industry. Hopefully, it will be a force for good *for* the industry and its people. President Luna is saying the right things—things like: "We feel this move [unification] will enable the railroad man to enjoy a good income and to have self respect in his industry. We need a growing industry, and we intend to devote ourselves to that end."

Three railroads join to provide Kaiser unit train

Steel mills have a heavy appetite for coal—and Kaiser Steel's complex at Fontana, Calif., is certainly no exception. Two years ago, Santa Fe began unit-train operations to bring 700,000 tons of New Mexico bituminous to Fontana each year (RA, Oct. 10, 1966, p. 16). And now, Rio Grande, Union Pacific and Santa Fe are opening up another unit-train service which will feed 700,000 tons per year of Utah coal to the mills.

Santa Fe's unit-train involved construction of a new piece of railroad, the 38-mile York Canyon Line branching from the ATSF main at French, N.M. The D&RGW-UP-ATSF operation required only a new two-and-a-half-mile Rio Grande connection to reach Kaiser's new mining and loading facilities at Sunnyside, Utah.

The new trains will operate 336 days a year—virtually continuous movement except for time off for miners' holidays and vacations. Each train will handle 8,400 tons of coal over the 806-mile run, and each movement will be on a 96-hour cycle, mine to mill and return.

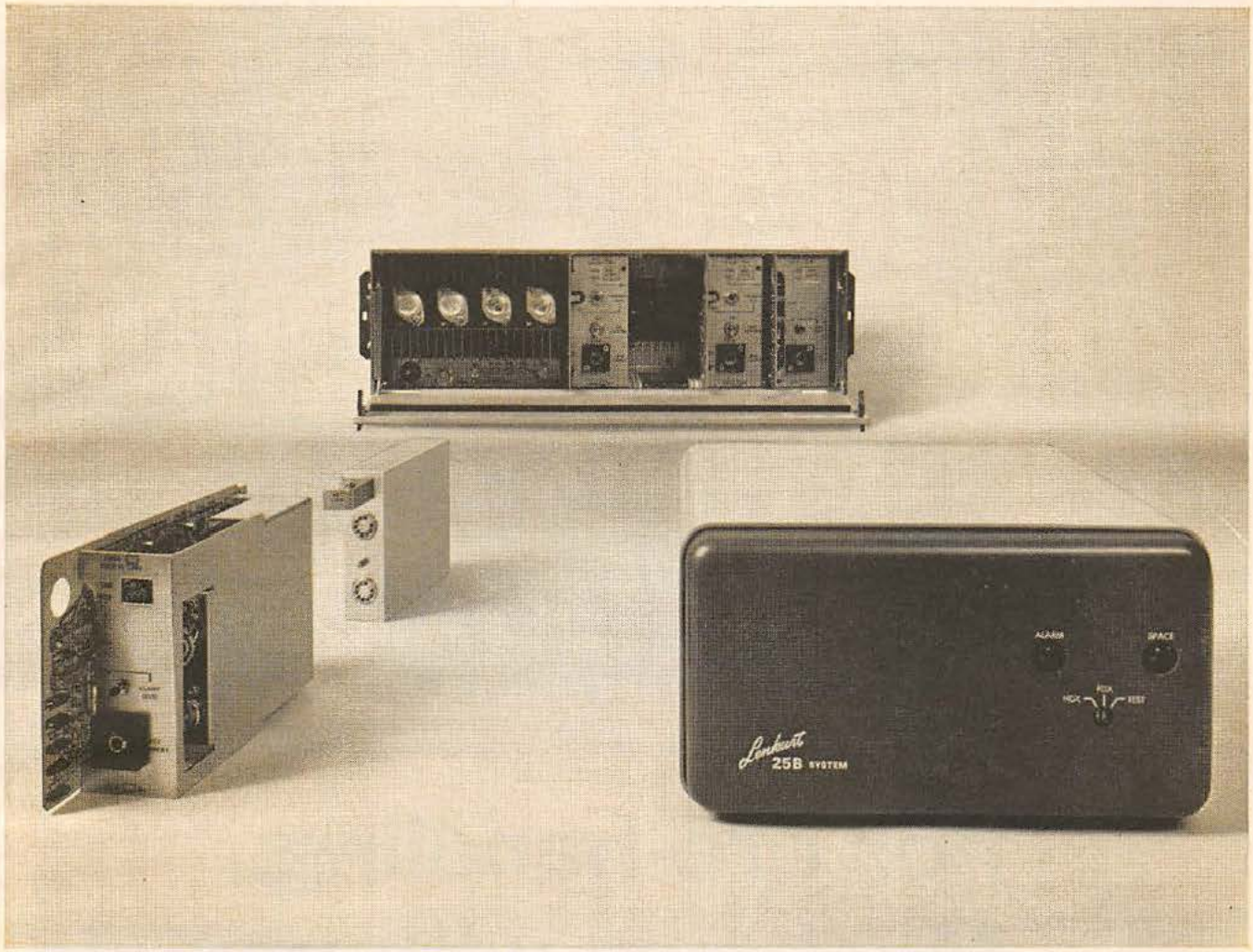
Coal has been moving from Utah to Fontana, but inauguration of unit-train service over the full route, the railroads say, will result in lowered transportation costs, plus improved dependability in coal supply and improved utilization of manpower and equipment.

Rio Grande takes the coal from origin to Provo, Utah, Union Pacific runs it to Barstow, Calif., and Santa Fe takes over for the last leg of the movement to Fontana.

Power is supplied by four 3,600-hp SD-45 units with D&RGW and UP each putting two units in the pool. Orders have been placed for 100-ton hopper cars for the train, but for the time being it is being operated with leased equipment.

Test runs, the roads say, have proved the feasibility of the operation—and have indicated that the normal four-day cycle can be speeded up by 12 hours if necessary to provide additional tonnage. Normal consist of the train will be 84 cars, with 16 cars held in reserve.

Over-all, the new service represents an investment of about $25 million, with the railroads putting almost $3.25 million into equipment and new and relocated track and Kaiser spending more than $1 million for facilities at Sunnyside, including an electronically-controlled loading operation which can turn a train of empties into loads in little more than an hour.



Introducing the versatile 25B Data Transmission System by Lenkurt: Adaptable to whatever mode your data's in.

The new 25B Data Transmission System is the economical way to handle computer, telegraph, and telemeter data – individually or in combination.

With the 25B, you get unmatched flexibility both in types of channels and in equipment arrangements. Plug-in filters give you a choice of five channel spacings and related data speeds – from 120 Hz for 75 b/s to 1020 Hz for 600 b/s. Compared to similar systems, you get about 20% more speed for a given channel spacing.

For single-channel operation, all you need is a pair of compact, self-contained modems working end-to-end. For multichannel applications, use two sets of terminal equipment. Or you can use terminal equipment to work into modems at several remote locations.

There are added benefits. Like three-frequency operation – ideal for on-hold-off applications. Like built-in test facilities. And many others.

Want more facts? Just call or write Lenkurt Electric Co., Inc., San Carlos, California.

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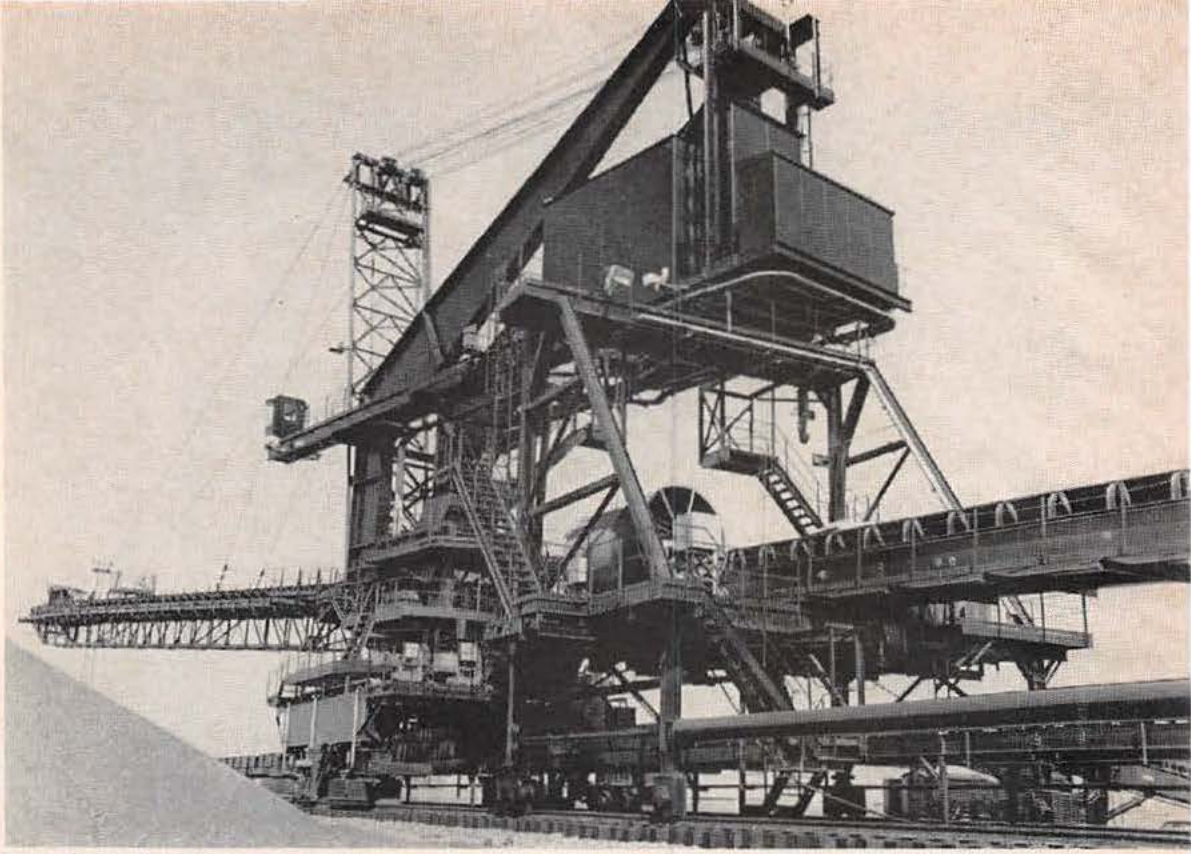
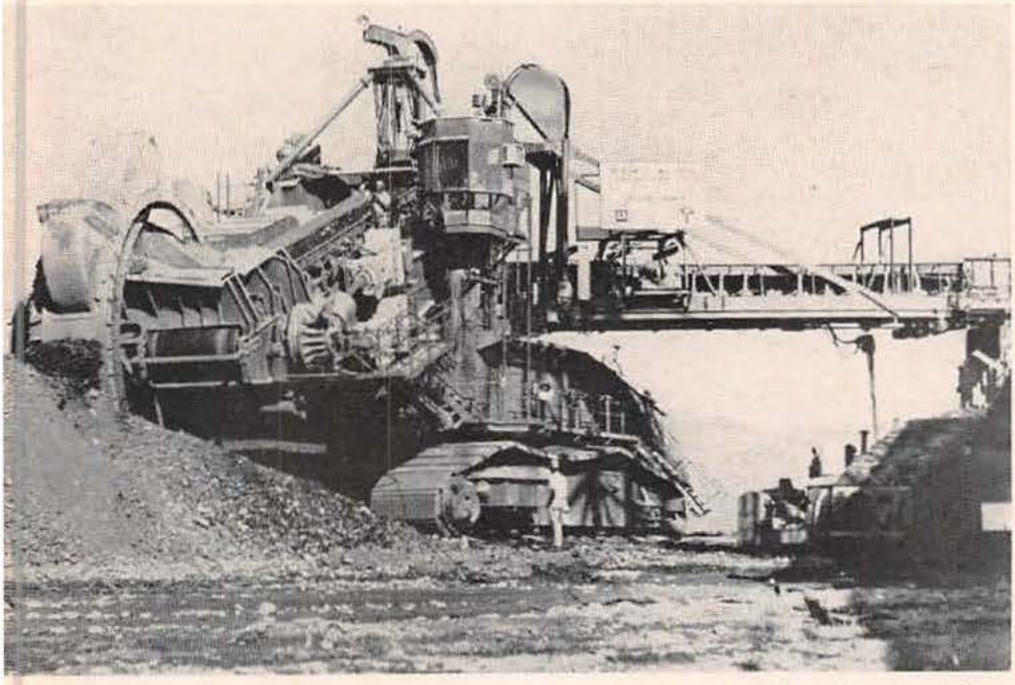


TRAVELING STACKER with built-in conveyors is typical of giant-size equipment which will operate in C&NW's new ore terminal. Stacker will serve storage yard with capacity for 2 million tons of ore.

For ore-handling: Machines with muscle

New Escanaba terminal underscores C&NW's heavy investment in the future.



MULTI-BUCKET excavating machine, known as a reclaimer, will gather up ore from storage piles in mammoth gulps and feed it to conveyors leading to ore dock.

One of the largest single facility-improvement projects to be undertaken by a U.S. railroad in recent years—Chicago & North Western's new iron-ore terminal at Escanaba, Mich.—will be ready for action when the upper-Great Lakes shipping season opens next spring and the ore boats start moving once again.

Cost of the project is pegged at $16 million—and its completion in 1969 will highlight a year in which C&NW will be spending substantially more for capital improvements than the $37 million laid out in 1968. Already, for instance, North Western has placed a single order for box cars which will involve expenditure of more than $30 million (RA, Dec. 9, p. 11).

C&NW's Escanaba modernization has been a three-year project—announced in 1967, progressed in '68, completed in '69. At the time the job was scheduled, Chairman Ben W. Heineman said the investment was "another manifestation of our interest in the future economic growth of the upper midwestern region and its iron-ore industry.

With this terminal, we seek to further strengthen the position of Upper Michigan iron ore in competition with ore from other areas. As the only iron-ore port on Lake Michigan, the strategic position of Escanaba will be substantially enhanced in serving the growing complex of steel plants on the Great Lakes, particularly in the Chicago and northern Indiana areas."

The terminal will be fed by mines in three Upper-Michigan ranges—Marquette, Menominee and Gogebic. It will feed lake vessels, which then have a clear shot 275 miles south on Lake Michigan to the Chicago area.

North Western puts special emphasis on the nature of the Escanaba terminal as a year-around operation. It will have an initial storage capacity of two million tons of pelletized ore, for buildup of stock-piles during the off-season for shipping. Equipment utilization should be considerably improved—and by the end of 1968, C&NW will have a fleet of 2,000 ore cars modified with installation of special holddown clamps for operation through a new, three-car rotary dumper at the port.

While the Escanaba project moves ahead, North Western is also taking drastic action on another vital front—car supply for handling manufactured items and other high-grade commodities.

Its recent order for 2,000 70-ton, 50-ft box cars is only a part of a 1969 equipment program—but, as President Larry S. Provo puts it, "This addition will represent a 40% increase in our fleet of 50-foot box cars and it should benefit shippers throughout our territory in several important ways. These cars will, for example, very substantially increase our abiilty to serve the growing paper industry of the upper midwest. Many cars will be pressed into service to carry other class A commodities such as food products and a wide variety of high-grade manufactured products."

North Western hopes, Provo says, that delivery of these 2,000 cars "will contribute to alleviating car shortages, particularly for this type of equipment which is experiencing growing popularity with shippers."

And he adds this significant observation:

"We believe the high-quality box car is actually the general-purpose car of the future."

Pullman-Standard will build the cars, on production lines at its Michigan City, Ind., and Bessemer, Ala., plants, on a schedule which calls for first deliveries in mid-March and completion of deliveries by June 1. For P-S, says President George L. Green, the order is the largest single order for box cars in more than 10 years, and it's the biggest single order for any type of freight equipment in three years. ■

LUTHER MILLER

AS THE EDITOR SEES IT

WHY DIVERSIFY?— In their fight for the right to diversify into other modes of transportation, railroads are going to have to come up with some mighty convincing agruments Write off, to start with, the plea that railroads "need" the extra security that might derive from a stake in highway, air or waterway transport; or the notion that railroads have some God-given, Congress-denied "right" to participate in growth areas that they were too astigmatized to recognize a few decades ago. These simply will not do. Smart railroad men know this. And if they're really smart, they may take some cues from a man who's been there. Such a man is Ian D. Sinclair, who, as president of the Canadian Pacific, heads the world's greatest integrated transportation enterprise.

TWO APPROACHES—In a recent presentation at Sir George Williams University in Montreal, Mr. Sinclair certainly was not trying to give any advice to his diversification-minded colleagues south of the border. But what he said is worth study. Briefly stated, he made a distinction between what he called "defensive diversification and aggressive diversification." In the former category, he mentioned the need to more fully utilize a corporation's resources; the need to lessen the risk of a failure; the desire to obtain balance by participating broadly in the economy.

THE AGGRESSIVE TACK—The real paydirt turns up in Mr. Sinclair's identification of two concepts of "aggressive" diversification: "The first . . . is the notion that the corporation should not merely defend against change, but that it should devote a major part of its energies to anticipating and promoting change and consciously direct its energies to the high growth areas of the economy. . . . The second . . . is the belief that the diversifying company can bring to bear on diverse business problems certain unique skills and abilities. These can be a superior management system, a superior pool of executive talent, a superior technical ability or a stronger credit base. . . . It is the second that is critical."

THE PUBLIC INTEREST—If our own railroads can persuade Congress that their interest in transportation conglomerates is far from being merely defensive (although the defense of even our present level of transportation excellence must be a part of the argument); that they are prepared to create and manage transportation companies that are aggressively in the public interest—if, in short, we can throw out the simplistic and selfish arguments that give the antis such an easy headline-hunting mark—then we're home free, if not easy.

WHEN YOU'RE READY TO SHIP VITAMINS, COME TALK TO ACF

People who know the Center Flow story don't laugh at unlikely ladings any more. Not even if you suggest shipping vitamins in bulk.

Since its introduction 7 years ago, ACF's Center Flow™ system has substantially changed the way dry bulk ladings are moved—especially such pure products as foodstuffs.

Center Flow eliminates contamination by keeping moisture and impurities out, freshness in. The smooth bore of the Center Flow and the absence of a center sill make for clean unloadings without hang-up and residue.

A wide variety of hatches and outlets enables you to pick the ones that speed up turn-around time. And Center Flow cars mean more profits when they're moving because their unique shape makes better use of cube.

Center Flow was developed with imagination. Men with vision are tapping its potential to change the nature of rail transportation. If there's something you'd like to try, come talk to ACF Industries, Incorporated, American Car & Foundry Division, St. Charles, Missouri 63301.

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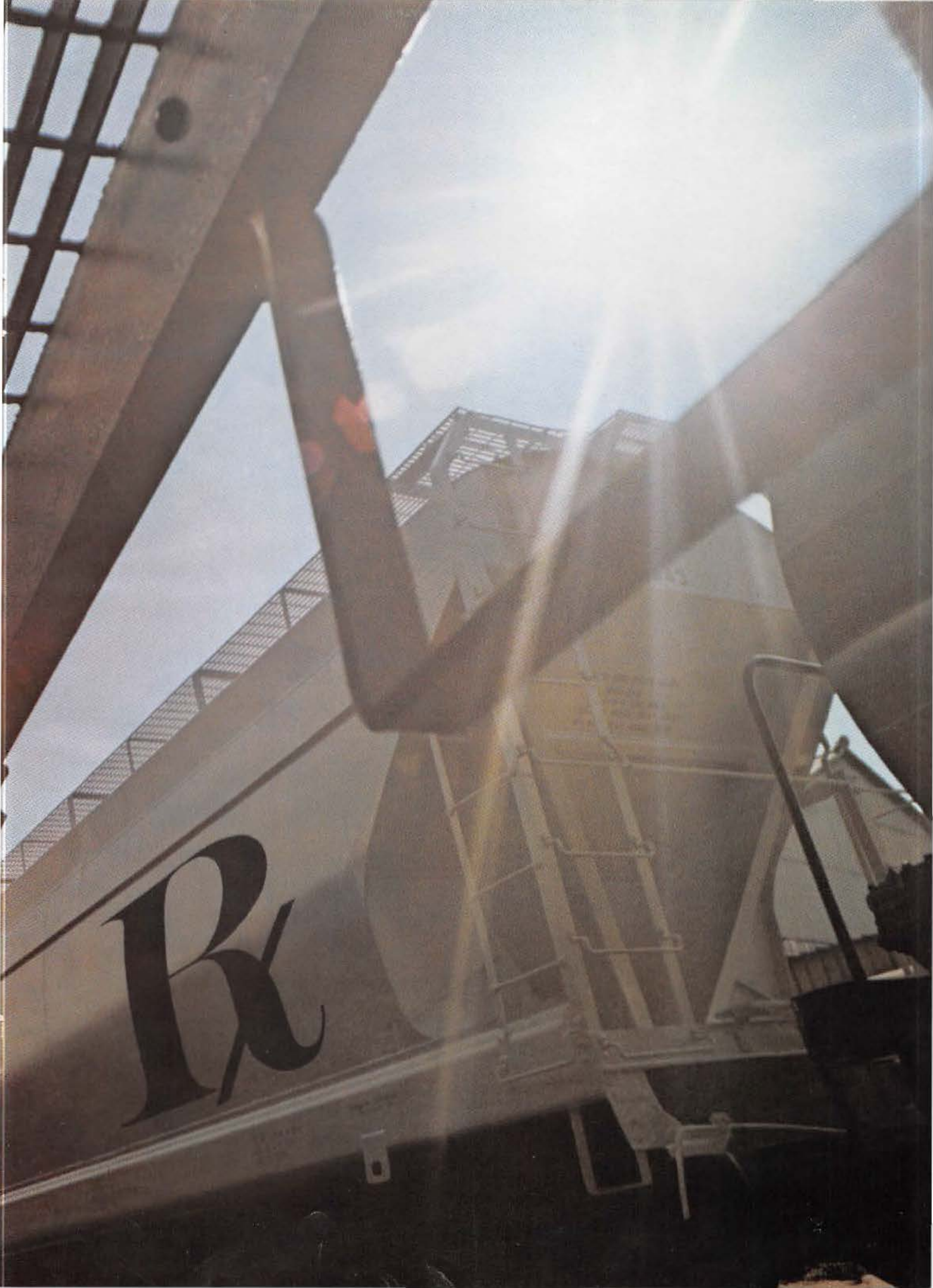
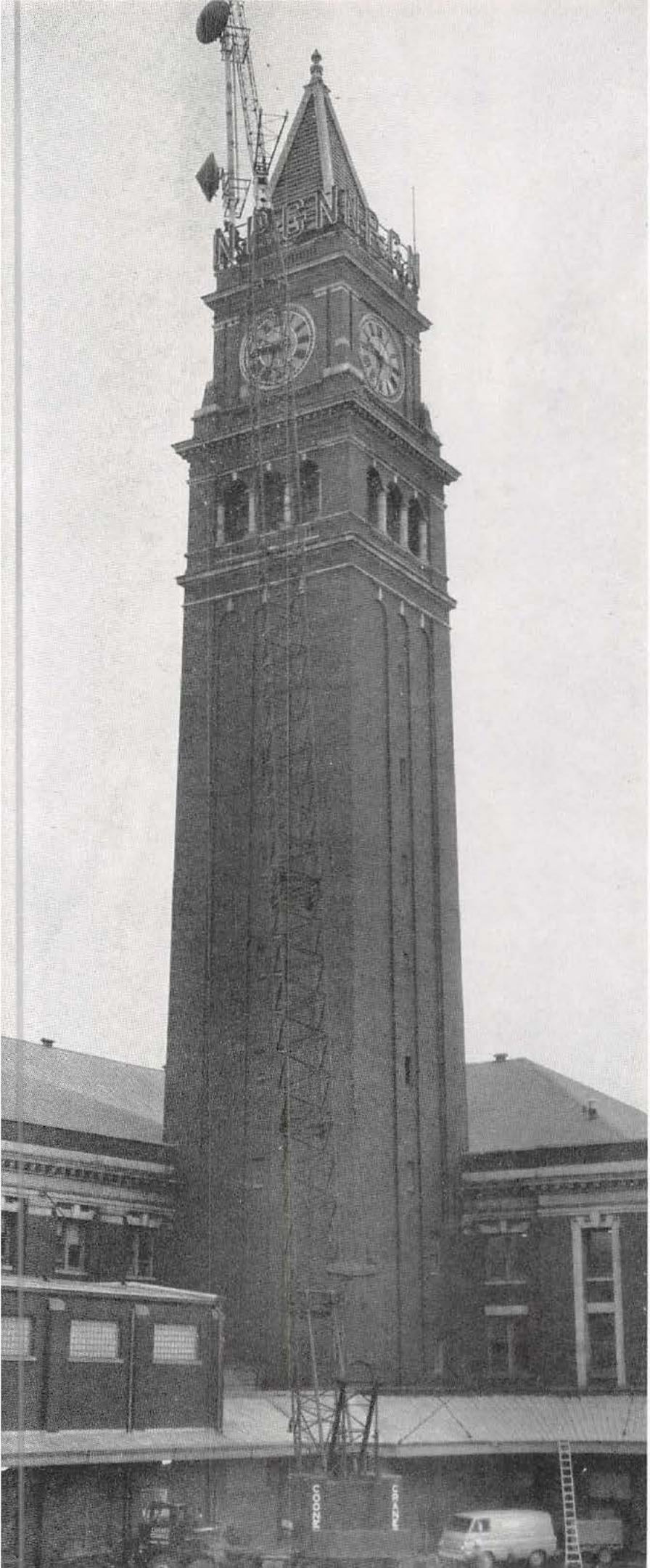
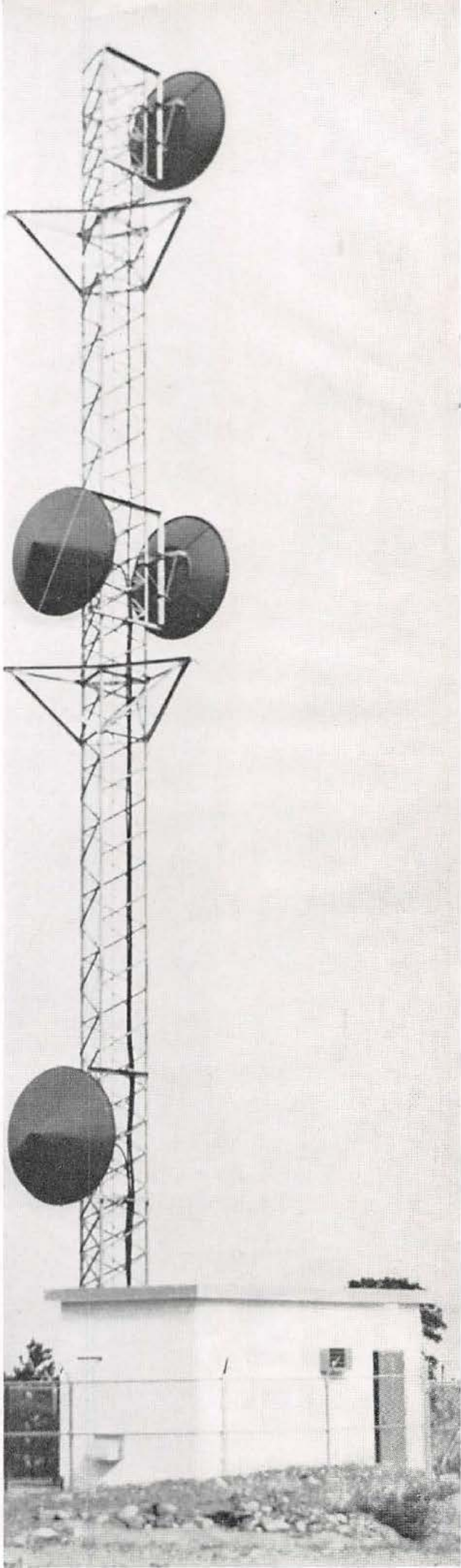






MICROWAVE:

For NP, a new high in communications

A 1,724-mile, $8.5-million microwave system, due to go into service in 1969, will help meet rising information requirements.

By **ROBERT W. McKNIGHT**
Signaling & Communications Editor

Final testing is now being carried out by Northern Pacific communications forces on the last leg of the road's 1,724-mile microwave system. Equipment at the Seattle, Wash., King Street station terminal site is getting its final check-up before the entire microwave system is in full operation early next year.

● **Microwave and the future.** The $8.5-million microwave system is only a part, but still the major portion, of NP's new communications plant. Additionally, some $500,000 is being spent for 4-wire telephone switching equipment that will provide improved dial telephone service. A feature of this telephone equipment is that it will provide 6-digit universal numbering for all NP offices.

As far back as 1964, Donald C. Hill, NP's superintendent of communications, realized that the growth of real-time, on-line computing, the rise in dial telephone usage and increasing data transmission would overtax the road's pole lines with its wire-line carrier facilities. Thus, Hill and his communications engineers began a two-year study, engineering and planning project. Part of this work involved a study of the trends in communications usage on NP, and what would be the requirements in 5 to 10 years.

Because all signs pointed to tremendous growth, Hill and his group decided that the road must turn to microwave or leased circuits from telephone and telegraph companies. Using a 10-year base period, the communications feasibility study indicated it would be more economical for NP to install its own microwave system, rather than use leased circuits.

● **Data usage growing.** Interchange information from NP yards and junctions is now sent to the road's computer center in St. Paul. Some of this information comes into St. Paul via 100-word-per-minute Teletype, from 17 yards and offices via IBM 1050 units. NP has, on order or in service, eight IBM 2780 transmission units that can send data at the rate of 75 cards/minute, compared with 7.5 cards/minute for a 1050 unit.

Presently, NP has an IBM 360/40 central computer, but it is planning for a 360/65 with a 2703 communications control unit. Frank H. Coyne, vice-president, management services, says NP is rapidly working toward an on-line, real-time computer operation with the associated management information (MIS) network. The early 1969 in-service date of the St. Paul-Seattle microwave system will give Coyne the big bulk communications pipe he will need for his MIS network. And it won't be a bit too soon, because the road's terminal performance control programs are being implemented at several yards, such as Laurel, Mont. Here, the 2780 unit is being used for high-speed data transmission to St. Paul's central computer. Also, the computer sends reports back to the Laurel yard at the same rate of 75 cards/minute.

NP is now designing a second-generation control system for its Pasco, Wash., retarder classification yard. A digital computer will be used for route selection and inventory of cars in the yard and terminal area. Louis W. Menk, NP president, says: "Interface with the central computer system at St. Paul will be accomplished by the use of IBM card devices, but some of our more optimistic planners foresee the day when direct communication between St. Paul and Pasco computers will enable transmission of advance consists without the card buffer.

"Terminal performance control will be processed at the central computer rather than at the yard because we have concluded that this is the more logical way to do it. Here, then, is a combination of new technology in yard control with an on-line, real-time information system, each increasing the other's capability."

● **Microwave's other benefits.** In addition to providing the bulk communications so necessary to NP's present and future operations, microwave has:

—Permitted removal of over 4,000 miles of line wire.

—Permitted removal of over 7,000 crossarms.

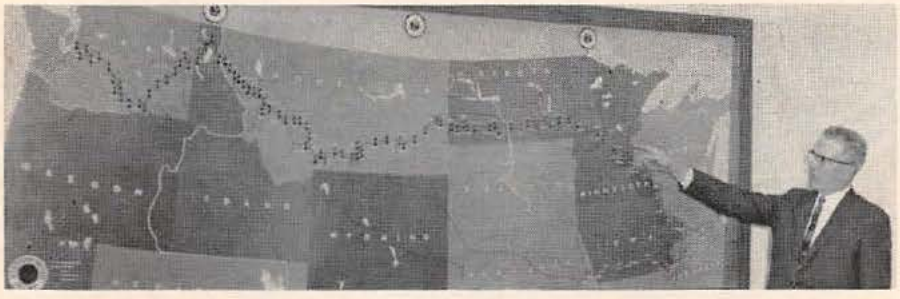
—Provided the circuits necessary to enable consolidation of dispatchers from Fargo, Minneapolis and Duluth divisions. Further dispatcher consolidations are planned for the rest of the NP system.

—Permitted removal of at least 50 miles of pole line.

—Given a capability of handling facsimile transmission, although not planned for the present. High-speed facsimile (6 seconds to transmit a waybill), takes about 40-60 voice channels. Hill says that development now under way on bandwidth compression techniques points to the possibility of operating high-speed facsimile in only a 20-voice channel bandwidth. As for the NP, it will be a wait-and-watch attitude.

● **85 microwave stations.** NP's St.

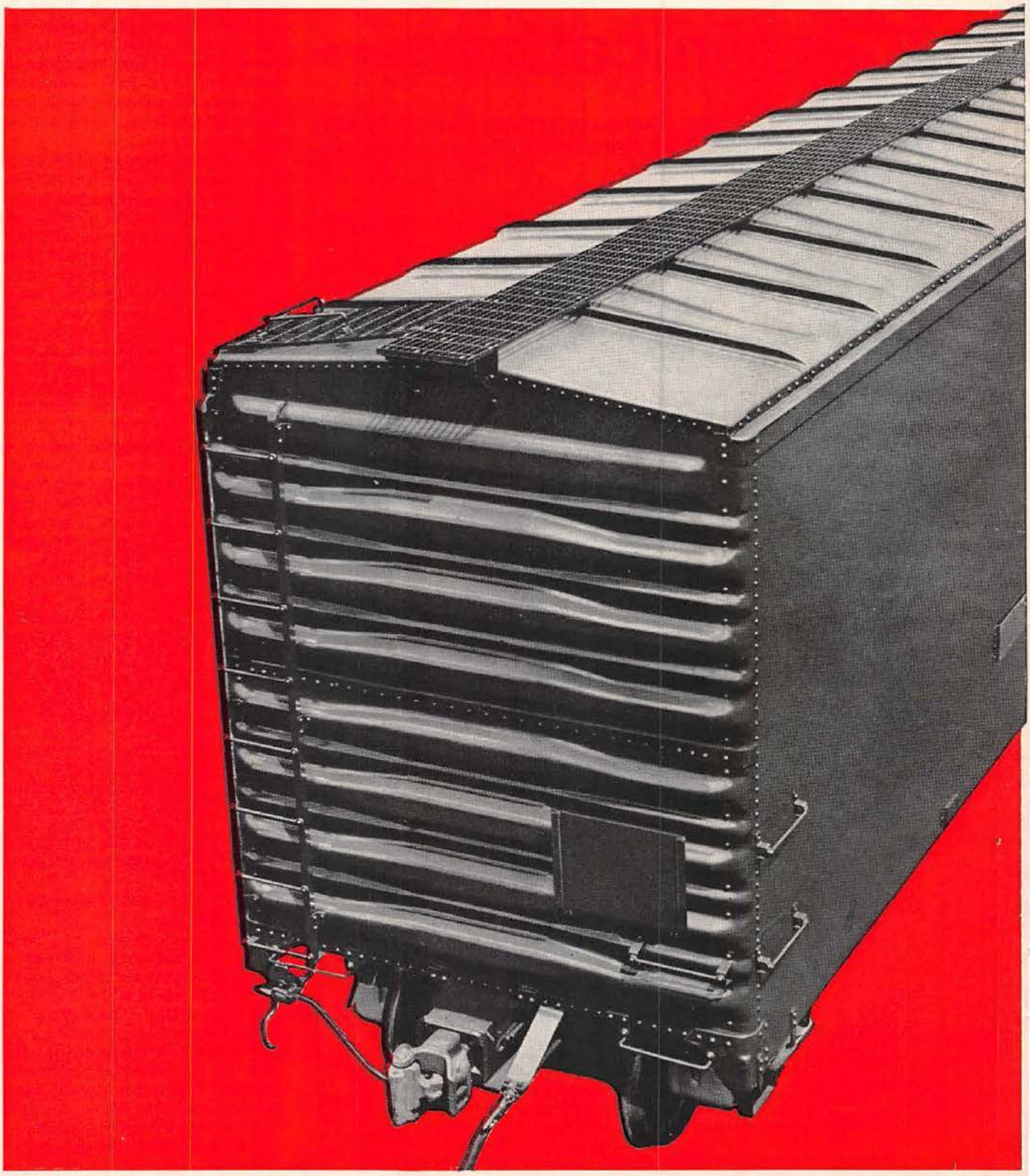
(Continued on page 24)



FROM ST. PAUL TO SEATTLE

D. C. Hill, Northern Pacific's superintendent of communications, is shown (above) with display panel showing repeater stations in system. Facing page: King St. Station in Seattle, Wash., where equipment is now undergoing a final check; and a repeater station at Rimrock, Mont. Hill views microwave system as essential link in the railroad's real-time information network. It replaces pole line system.

Put Standard where the stress is,



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Standard Diagonal Panel Roof

The strongest design possible for its depth. Resistance to twisting stresses keeps the car frame square. Lasts the life of the car.

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Circle 12 on coupon page 33

FRANK MALONE

WATCHING WASHINGTON

THROUGH A DOT WINDOW— Alan S. Boyd, Secretary of Transportation, sees DOT's reason-for-being when he looks out from his office window. Parked cars fill two lanes of four-lane streets. "What a waste," Boyd says. "The grid of streets already laid is a tremendous asset being most inefficiently utilized." He sees more than streets, too.

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(*Continued from page 21*)

Paul-Seattle microwave system stretches 1,724 miles along its mainlines and consists of 85 stations—16 terminals, 57 repeaters, 10 three-way junctions and 2 four-way junctions. Microwave system installation by Collins Radio Co. included construction and installation work, plus training of NP electronic technicians in microwave maintenance and testing, was carried out by the manufacturer.

To alert maintenance personnel of any microwave system failures, eleven functions, conditions or equipments are being alarmed: (1) AC failure; (2) major battery charger; (3) major equipment—transmitter/receiver; (4) tower lighting; (5) high-low temperature in building; (6) illegal entry; (7) low fuel for standby generator plant; (8) dehydrator on waveguide (7-8 psi); (9) generator-run; (10) minor battery charger (standby unit); (11) minor equipment-standby transmitter/receiver.

Alarm indications, red light for a fault, green light for proper operation of the system, are brought into eight locations: St. Paul, Fargo, Glendive, Billings, Livingston, Missoula, Spokane and Seattle. Wire chiefs are located at all these points, except at Billings. When an alarm is indicated—for a particular station for a particular function—the red light is illuminated and a buzzer sounds. Normal practice is for the wire chief to cut out the buzzer and notify a radio maintainer for action to correct the fault. When the fault clears, the red lamp goes out and the green lamp is lighted. The buzzer again sounds, and the wire chief operates a switch to cut it off. Operation of the buzzer thus alerts the wire chief to a change of status of the alarm system.

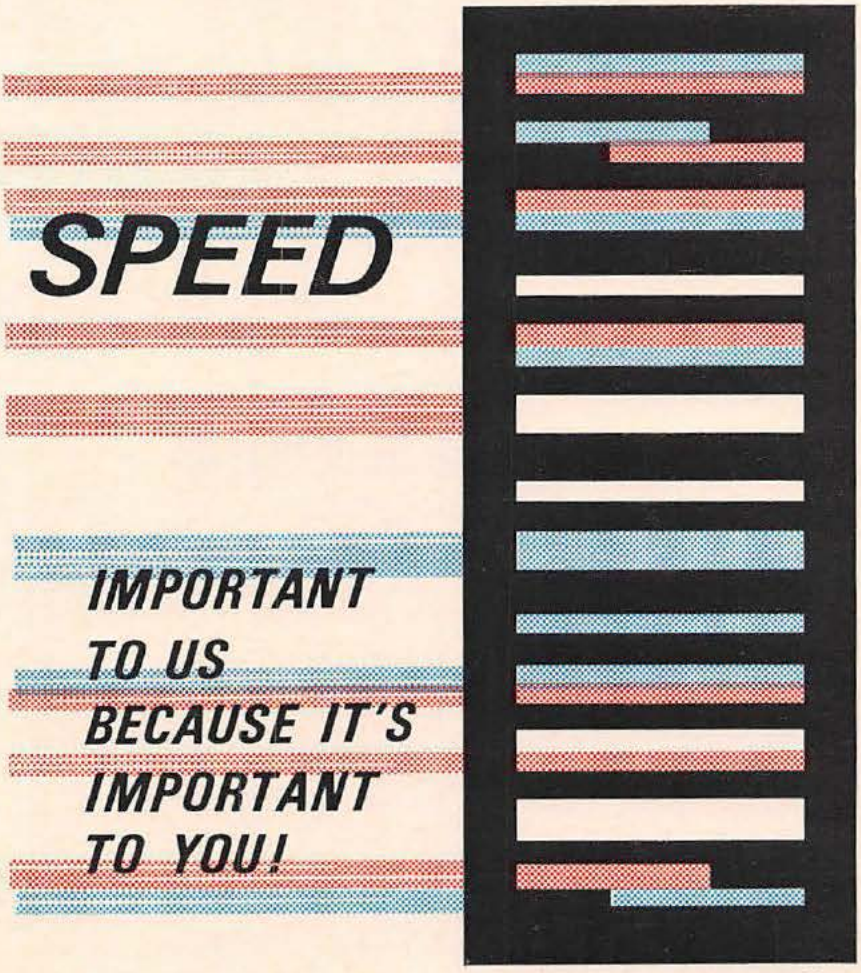
● **Operating status board.** In superintendent of communications Hill's office is a 10 ft by 4.5 ft fault alarm display map showing the entire microwave system, the NP mainline and time zones. Each microwave station is represented by two lights: a red one to indicate a fault; and a green one to indicate that the station is operating satisfactorily.

The information required for operation of this display map in Hill's office in St. Paul is acquired from the basic FA-102 (tone on) fault alarm system. The basic FA-102 system is used to activate a secondary FA-102 fault alarm and voice channel system which transmits the station alarms to St. Paul.

Hill points out that this map display has proved very valuable and time saving for him. This is particularly helpful when someone has trouble making a phone call or a teleprinter circuit fails.

● **Universal numbering.** One of the big advantages for NP telephone users is that they will shortly be able to dial any office on the railroad using only six digits. This universal numbering plan is a result of the road's installing Stromberg-Carlson motorswitch 4-wire common control switching equipment which includes register senders. The 4-wire switching equipments are at St. Paul, Glendive, Billings, Missoula, Spokane and Seattle.

NP gained experience with 4-wire switching equipment when it installed the first S-C equipment in 1957. This system, however, switched only eight carrier channels at each of the six locations. The NP motorswitch system is wired for 800 circuits, of which 532 will be in use when the system is fully



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operational early next year. Future expansion can be accommodated.

Advantages of the new 4-wire motor-switching system include:

—High speed switching capability for voice and data traffic.

—Minimum end-to-end transmission loss with attendant high uniformity of transmission level for all calls, whether extending over long or short distances and through several or few tandem switching points.

—Motorswitch 4-wire switching provides four wires for audio path and four wires for call supervision and control.

—Register-sender equipment provides for universal numbering. In the case of NP, the subscriber needs to dial only six digits to reach any station.

—Alternate routing is controlled by the equipment to improve service when primary routes are busy.

NP is also upgrading other telephone facilities. For example, by the end of next year all stations on the mainline will be equipped with dial telephone service. Most of the message circuit dialing equipment is being replaced with a new SC-developed dial line adaptor which can accommodate up to 10 stations on a line. This equipment upgrades service by reducing the number of stations on a line.

At Staples, Jamestown, Mandan, Dickinson and Helena, NP installed 100-line, Stromberg-Carlson Compak switching equipment. These smaller exchanges have the ability to handle calls on a universal numbering basis, plus frequency selective ringing to handle multi-party message dialing systems.

At present, NP has nine attended, leased PBXs, but has plans for converting some of them to automatic exchanges.

NP has telephone maintainers at 11 points on-line and one teletypewriter maintainer. These maintainers have at least a second-class FCC radio-telephone license.

For the future, NP is considering two possibilities as extensions of its 4-wire switching capability: handling data transmission and mobile telephone service. Although not now in service, the 4-wire switching equipment is capable of handling data transmission on a switched basis. This might be feasible at night when telephone traffic is lowest. With extensive use of subscriber tone dialing, NP could provide mobile dial telephone service to its vehicles. Such might be most helpful to trainmasters, communications maintenance personnel and M/W crews that often have to be away from telephones. Although many are now equipped with two-way radio, the mobile dial service would enable them to be connected into NP's dial telephone system, giving them ready access to any railroad office.

● **Communications maintenance.** As might be expected from the size of its communications plant, NP considers maintenance of this plant to be an important function. In addition to manufacturers' training of men on microwave and 4-wire switching equipments, Motorola conducted classes for NP radio maintainers to acquaint them with servicing of its Motran solid-state, two-way radio equipment line.

NP has 15 microwave and radio shops which are spaced approximately every 100-200 miles across the system from Duluth to Seattle. Similarly, telephone maintenance points (location of a shop or headquarters of a maintainer without a shop) are spread across the system. Additionally, teletypewriter maintainers are at Spokane, as well as at the communications shops at St. Paul and Seattle. These shops serve for general repair and servicing of telephone, teletypewriter and carrier equipment.

Automatic exchanges

NP telephone maintainers have 20 automatic exchanges, six 4-wire switching equipment centers, dial telephones over most of the system as well as party-line dialing equipment to service and maintain. On the teleprinter side, NP has some 40 yards and offices equipped with this communicatio .s equipment, which also has to be maintained and serviced.

● **Considerable radio equipment.** NP was one of the pioneering roads in the use of radio. Hill, then under F. L. Steinbright, worked on the first installation of the road's dispatcher-to-train wayside radio system in 1952. This 410-mile system between Dilworth, Minn. and Glendive, Mont., has since been expanded to cover about 1,170 miles from Fargo to Spokane, with the exception of a 70-mile section from Missoula to Paradise, Mont. Where CTC machines are located at Glendive, Missoula, Spokane and Tacoma the dispatcher has control of wayside radio stations in CTC territory enabling him to contact or be contacted directly by train crews.

In all, NP has some 136 radio base stations for the railway and 4 for NP Transport Co., its trucking subsidiary. Mobile transmitters total 1,400 and the road has about 300 walkie-talkies.

Mechanical department employees change radio sets on rolling stock, and radio maintainers take care of the base stations. NP has standardized on 30-watt sets for locomotives (64 volts DC), cabooses (12 volts DC) and base stations (117 volts AC). Automotive-type radio equipment is used in trucks, automobiles and on M/W equipment, operating on 12 volts DC. Consideration is being given to provide some automobiles with mobile dial phone service working through base radio stations.

In a few locations where the railroad line is in a canyon or heavily wooded area, repeater stations have been installed to provide improved radio coverage. These repeater stations are keyed by adjacent wayside base stations. The repeater station is located so as to be able to beam its signal to the area normally missed by the other wayside base stations.

● **Hand-picked team.** Much of the credit for the success of NP's communications department in bringing the railroad into a position of being able to efficiently handle the increased communications traffic load is due to Don Hill's hand-picked communications staff.

Another part of the success is due to the specialization that Hill has fostered in his department.

Hill's present team consists of Fred B. Childs, assistant superintendent of communications at St. Paul, heading up the eastern half of the railroad's communications plant and Gordon F. Hill, assistant superintendent of communications at Seattle, Wash., holding a similar function.

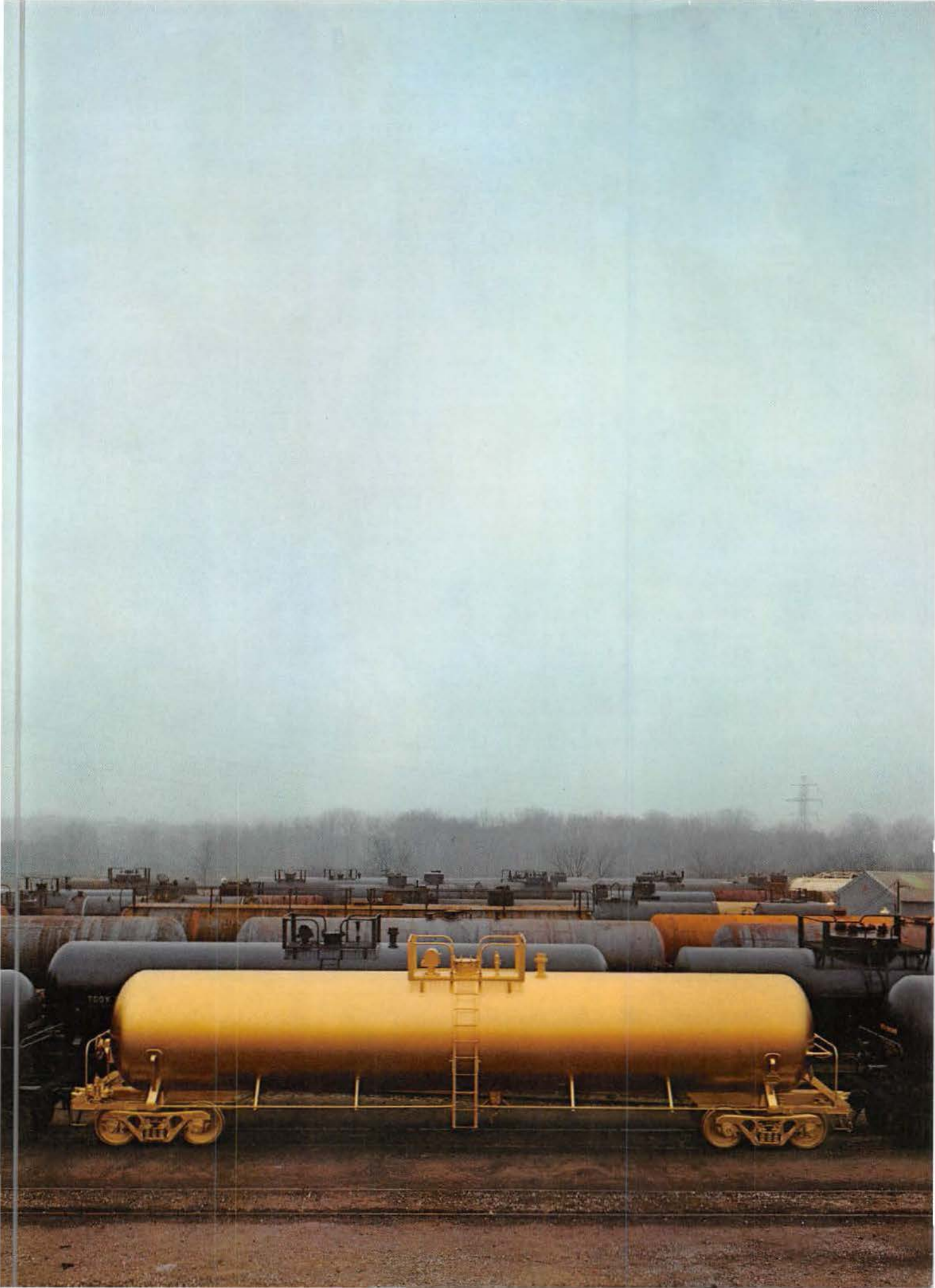
Leonard L. Pilate, manager, data communications systems, is the data communications specialist, with the exacting job of forecasting needs to meet Frank Coyne's expanding management information services department. Much of Pilate's work is concerned with channels and equipment such as teletypewriter facilities, and the various IBM card transmission units. He is aided by H. E. Morrison, assistant manager, and D. B. Goodwin, traffic supervisor.

Telephone engineer Kenneth M. Rue and three assistant telephone engineers, L. J. Grivna, J. L. Petersen and M. R. Timm, are concerned with NP's system-wide dial telephone system. They do planning, design and supervise installation work in this area.

Radio engineer Chester A. Bacon and assistant radio engineer G. E. Nelson are concerned with radio and microwave. Here too, they do planning, design and supervise installation work.

Since Pilate, Rue and Bacon are always looking for more communications channels, it is natural that they coordinate their tasks with Don Hill and his two associates Fred Childs and Gordon Hill. As there is a limit to funds

(Continued on page 28)



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MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended Dec. 7 totaled 546,238 cars, the Association of American Railroads announced on Dec. 12. This was an increase of 34,412 cars, or 6.7%, compared with the previous week; a decrease of 9,307 cars, or 1.7%, compared with the corresponding week last year; and a decrease of 16,431 cars, or 2.9%, compared with the equivalent 1966 week. Ton-miles generated by carloadings in the week ended Dec. 7 are estimated at 14.3 billion, an increase of 3.4% above the corresponding week of 1967, and 0.5% above the 1966 week.

Breakdown of carloadings for preceding week follows:

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, Nov. 30

District	1968	1967	1966
Eastern, including Allegheny and Pocahontas	188,790	217,464	224,816
Southern	121,392	120,426	120,989
Total Eastern and Southern Districts	310,182	337,890	345,805
Northwestern	61,518	66,600	66,721
Central Western	103,908	111,470	118,950
Southwestern	36,218	40,755	40,713
Total Western Districts	201,644	218,825	226,384
Total All Roads	511,826	556,715	572,189
Commodities:			
Grain and Grain Products	46,242	52,722	55,204
Livestock	1,349	2,121	2,702
Coal	92,226	109,659	114,715
Coke	7,244	8,211	8,293
Forest Products	39,318	39,454	37,755
Ore	27,660	30,882	29,484
Merchandise l.c.l.	3,297	4,262	6,249
Miscellaneous	294,490	309,404	317,787
Nov. 30	511,826	556,715	572,189
Nov. 23	578,381	491,621	524,057
Nov. 16	554,611	572,891	609,013
Nov. 9	577,180	569,281	585,787
Nov. 2	611,819	575,552	613,751
Cumulative total, 48 weeks	26,235,478	26,094,349	27,571,046
Estimated revenue ton-miles (billions) 48 weeks	690.3	667.4	687.2

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the holiday week ended Nov. 30 totaled 23,098 cars, carrying 37,151 trailers, compared with 24,381 cars, carrying 40,020 trailers, in the corresponding 1967 week. Loadings for 1968 up to Nov. 30 totaled 1,241,582 cars, carrying 2,022,577 trailers, compared with 1,115,604 cars, carrying 1,834,105 trailers, in the corresponding period of 1967.

IN CANADA

Carloadings for the seven-day period ended Nov. 21 totaled 75,655 cars, compared with 71,414 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd. from Connections
Totals for Canada		
Nov. 21, 1968	75,655	22,328
Nov. 21, 1967	73,981	23,181
Cumulative Totals		
Nov. 21, 1968	3,368,124	1,099,334
Nov. 21, 1967	3,409,168	1,105,725

RAILROAD GROSS CAPITAL EXPENDITURES BY DISTRICT

(figures in thousands*)

	First half 1968	All 1967	All 1966
For road			
Eastern district	$ 75,377	$ 162,205	$ 167,917
Southern district	20,102	55,547	63,061
Western district	62,094	155,994	167,626
Total road	**157,573**	**373,746**	**398,604**
For equipment			
Eastern district	160,116	410,610	518,328
Southern district	91,075	198,821	279,399
Western district	215,380	538,909	766,697
Total equipment	**466,571**	**1,148,340**	**1,564,424**
Totals by district			
Eastern district	235,493	572,815	686,245
Southern district	111,177	254,368	342,460
Western district	277,474	694,903	934,323
GRAND TOTAL	**624,144**	**1,522,086**	**1,963,028**

*Because of rounding, figures do not necessarily add to totals.
Source: Bureau of Economics, ICC.

ESTIMATED RAILROAD GROSS CAPITAL EXPENDITURES—1968*

(compared with actual 1967 expenditures)

	Fourth quarter 1968	Full year 1968	Full year 1967
For road			
Eastern district	$ 53,272	$ 174,040	$ 153,303
Southern district	19,244	55,993	52,396
Western district	52,412	174,078	154,000
Total road	**124,928**	**404,111**	**359,426**
For equipment			
Eastern district	76,949	316,923	391,910
Southern district	45,122	159,624	180,467
Western district	77,307	374,293	538,175
Total equipment	**199,378**	**850,840**	**1,110,552**
Totals by district			
Eastern district	130,221	490,963	544,940
Southern district	64,366	215,617	232,863
Western district	129,719	548,371	692,176
GRAND TOTAL	**324,306**	**1,254,951**	**1,469,979**

*Figures in thousands. Because of rounding, figures do not necessarily add to totals.
Source: Bureau of Economics, ICC.

ICC keeps busy as '68 draws to a close

About a dozen problems await the Commission's adjudication.

By **FRANK MALONE**, Washington Editor

Should merger of Norfolk & Western and Chesapeake & Ohio be permitted? Does the Interstate Commerce Commission have statutory power to enforce what it calls inadequate standards for rail passenger service? Will the Commission keep using fully-distributed costs as its base for determining the lowest-cost carrier in intermodal competition?

These are the major rail-related questions among a dozen awaiting ICC answers as 1968 moves off the calendar. Estimates on arrival of the first answer vary from early January to late February. The second answer may come within one week to five weeks. When the third issue will be settled is anybody's guess. But no matter which way the answers go, their impact on the rail industry will be enormous, and ICC seems fully impressed with the size of the issues.

Right behind these three in importance is the dirty-car question: Do railroads have the right to fine shippers and receivers who fail to clean the cars they use? Also on the ICC scorecard are three other mergers, per diem and demurrage rules, actual passenger-service costs, minimum weights for covered hoppers, TOFC mixture rules, and division of inter-territory revenues.

● **N&W-C&O report soon.** It now looks like the report of ICC Examiner Edward L. Boisseree on the N&W-C&O merger will come soon after Jan. 1. Previously, it was expected before the end of this year.

In this case the major issues seem to be settled already. The conditions suggested by the Department of Justice have been accepted by the railroads. The railroads accepted with reluctance over "additional heavy burdens," but with determination to meet new competition from the Penn Central.

Justice said the Commission should keep jurisdiction over the merged railroads for ten years to determine whether there should be an eventual relinquishing of former Wabash lines west of the Mississippi River. Secondly, Justice said the ICC should require a promise from the new system to keep operating the five smaller lines to be included, even if any of them go bankrupt. Finally, the Commission should get N&W-C&O assurance of competitive freight service to and from the state of Maine.

One of the main things Examiner Boisseree is considering is the future status of the Reading. The railroad supports the merger, but not accompanying plans for inserting Reading as a controlled subsidiary of a new holding company, Dereco. Reading wants its properties merged with the other railroads in the system, under terms equitable to its shareholders.

● **How far can ICC go?** In another significant issue, the ICC is expected to decide whether it has the same authority to order adequate service for passenger movment as it does for freight. The full Commission now is weighing the recommendation of Examiner John S. Messer that it assume greater passenger service jurisdiction because it has authority to do so under provisions of Section 1 of the Interstate Commerce Act.

Messer's specific proposals for standards include full meals on trains covering more than 250 miles, sleeping accommodations on trains running between 10 p.m. and 8 a.m., diner-lounge cars on trains in transit 12 or more hours, average passenger-train speeds equal to those of the fastest freight trains and clean cars with heating and cooling systems that really work. Messer calls for a national rail passenger system "capable of meeting present and future intercity rail transportation requirements."

● **What about out-of-pocket costs?** In determining which carrier in a competitive-rate case has the "inherent advantage" from low costs, should the ICC consider just fully-distributed costs? Railroads say no, that the only true test is whether proposed rates exceed a carrier's out-of-pocket costs and compensate enough to improve net income. But ICC seems bent on ending the six-year-old cost-evidence case by adopting the Oct. 10, 1966 report of Examiner J. S. Kaplan advising adherence to the full-cost basis.

Rails want the case re-opened so they can present new arguments for consideration of out-of-pocket costs. Cost evidence must be tailored to different operating and service conditions, they say. At stake is permanent ICC policy for settling competitive-rate cases. An example of where that policy would be used is the Ingot Molds case in which the Supreme Court upheld an ICC ban on reduced railroad rates in a bid to gain ingot molds shipments from truck-water routes. Rails interpret the court ruling as temporary only. The Court wants ICC once and for all to establish clear rules for cost-evidence, and out-of-pocket costs aren't excluded, railroads argue.

● **Can rails charge for dirty cars?** In an effort to improve car supply and cut switching expenses, railroads are seeking ICC permission to charge shippers and customers $25 for a car that comes back with so many leftovers that it has to be cleaned before another customer can use it. Following the unfavorable report of Examiner William J. Sweeney, the Commission in August ruled against the proposed fines. Then the ICC decided to reexamine the issue as a matter of general transportation importance.

● **Other issues.** In progress at ICC are hearings on the Illinois Central-Gulf, Mobile & Ohio merger. For two other mergers, Milwaukee-Chicago & North Western and Rock Island with either North Western or Union Pacific, examiners' reports are awaited.

The Commission is investigating a proposal for raising minimum weights of grain loadings in rail-owned or-leased covered hoppers. ICC has suspended a tariff that would have imposed minimum weights based on the cars' marked capacity.

Also hanging is a proposed new ICC method for setting per-diem charges based on mileage as well as time. Because of court actions brought against the proposal by railroads, the effective date of the order has been postponed. In its investigation of proposed changes in the average demurrage agreement of railroads, ICC will finish taking requests for cross examination Dec. 18. Hearings will begin Jan. 7.

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RAILROAD GROSS CAPITAL EXPENDITURES BY DISTRICT

(figures in thousands*)

	First half 1968	All 1967	All 1966
For road			
Eastern district	$ 75,377	$ 162,205	$ 167,917
Southern district	20,102	55,547	63,061
Western district	62,094	155,994	167,626
Total road	**157,573**	**373,746**	**398,604**
For equipment			
Eastern district	160,116	410,610	518,328
Southern district	91,075	198,821	279,399
Western district	215,380	538,909	766,697
Total equipment	**466,571**	**1,148,340**	**1,564,424**
Totals by district			
Eastern district	235,493	572,815	686,245
Southern district	111,177	254,368	342,460
Western district	277,474	694,903	934,323
GRAND TOTAL	**624,144**	**1,522,086**	**1,963,028**

*Because of rounding, figures do not necessarily add to totals.
Source: Bureau of Economics, ICC.

ESTIMATED RAILROAD GROSS CAPITAL EXPENDITURES—1968*

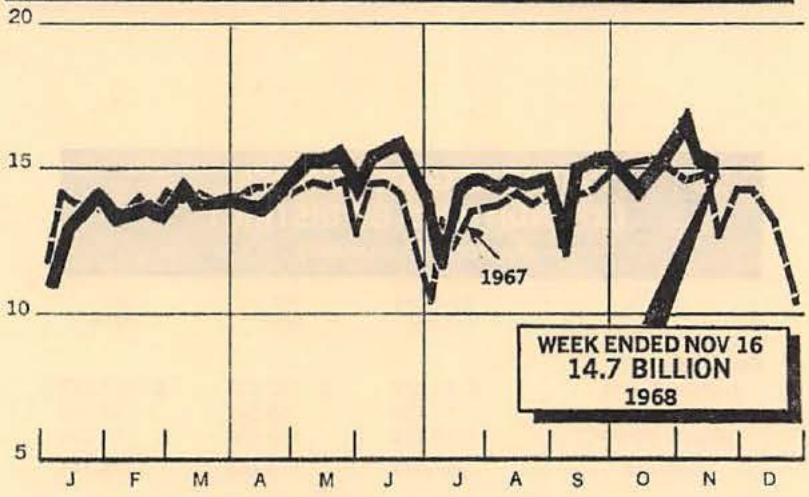
(compared with actual 1967 expenditures)

	Fourth quarter 1968	Full year 1968	Full year 1967
For road			
Eastern district	$ 53,272	$ 174,040	$ 153,303
Southern district	19,244	55,993	52,396
Western district	52,412	174,078	154,000
Total road	**124,928**	**404,111**	**359,426**
For equipment			
Eastern district	76,949	316,923	391,910
Southern district	45,122	159,624	180,467
Western district	77,307	374,293	538,175
Total equipment	**199,378**	**850,840**	**1,110,552**
Totals by district			
Eastern district	130,221	490,963	544,940
Southern district	64,366	215,617	232,863
Western district	129,719	548,371	692,176
GRAND TOTAL	**324,306**	**1,254,951**	**1,469,979**

*Figures in thousands. Because of rounding, figures do not necessarily add to totals.
Source: Bureau of Economics, ICC.

RAIL FREIGHT TRAFFIC TRENDS

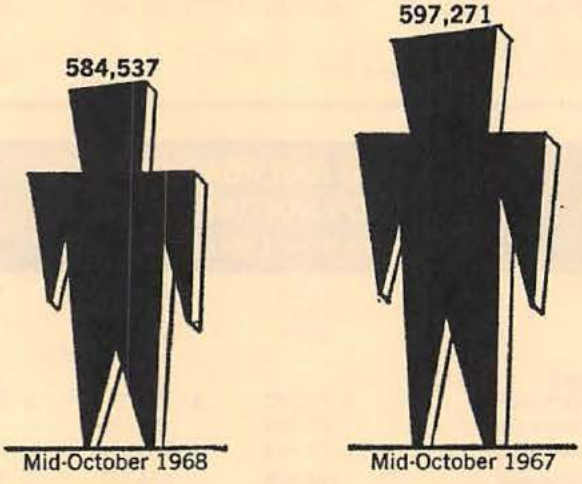
BILLION TON-MILES (Estimated)



Source: Association of American Railroads

RAILROAD EMPLOYMENT

(CLASS I LINE-HAUL RAILROADS)



Source: Bureau of Economics, ICC.

Current Statistics

Net income, Class I roads	
Nine months, 1968	$386,000,000
Nine months, 1967	342,200,000
New freight cars on order	
Nov. 1, 1968	21,395
Nov. 1, 1967	21,062
New freight cars delivered	
10 months, 1968	47,595
10 months, 1967	72,490
Serviceable cars	
Nov. 1, 1968	1,386,822
Nov. 1, 1967	1,414,381

MARKET OUTLOOK

CARLOADINGS

Loadings of revenue freight in the week ended Dec. 7 totaled 546,238 cars, the Association of American Railroads announced on Dec. 12. This was an increase of 34,412 cars, or 6.7%, compared with the previous week; a decrease of 9,307 cars, or 1.7%, compared with the corresponding week last year; and a decrease of 16,431 cars, or 2.9%, compared with the equivalent 1966 week. Ton-miles generated by carloadings in the week ended Dec. 7 are estimated at 14.3 billion, an increase of 3.4% above the corresponding week of 1967, and 0.5% above the 1966 week.

Breakdown of carloadings for preceding week follows:

REVENUE FREIGHT CARLOADINGS
For the week ended Saturday, Nov. 30

District	1968	1967	1966
Eastern, including Allegheny and Pocahontas	188,790	217,464	224,816
Southern	121,392	120,426	120,989
Total Eastern and Southern Districts	310,182	337,890	345,805
Northwestern	61,518	66,600	66,721
Central Western	103,908	111,470	118,950
Southwestern	36,218	40,755	40,713
Total Western Districts	201,644	218,825	226,384
Total All Roads	511,826	556,715	572,189
Commodities:			
Grain and Grain Products	46,242	52,722	55,204
Livestock	1,349	2,121	2,702
Coal	92,226	109,659	114,715
Coke	7,244	8,211	8,293
Forest Products	39,318	39,454	37,755
Ore	27,660	30,882	29,484
Merchandise l.c.l.	3,297	4,262	6,249
Miscellaneous	294,490	309,404	317,787
Nov. 30	511,826	556,715	572,189
Nov. 23	578,381	491,621	524,057
Nov. 16	554,611	572,891	609,013
Nov. 9	577,180	569,281	585,787
Nov. 2	611,819	575,552	613,751
Cumulative total, 48 weeks	26,235,478	26,094,349	27,571,046
Estimated revenue ton-miles (billions) 48 weeks	690.3	667.4	687.2

PIGGYBACK CARLOADINGS

U. S. piggyback loadings for the holiday week ended Nov. 30 totaled 23,098 cars, carrying 37,151 trailers, compared with 24,381 cars, carrying 40,020 trailers, in the corresponding 1967 week. Loadings for 1968 up to Nov. 30 totaled 1,241,582 cars, carrying 2,022,577 trailers, compared with 1,115,604 cars, carrying 1,834,105 trailers, in the corresponding period of 1967.

IN CANADA

Carloadings for the seven-day period ended Nov. 21 totaled 75,655 cars, compared with 71,414 for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd. from Connections
Totals for Canada		
Nov. 21, 1968	75,655	22,328
Nov. 21, 1967	73,981	23,181
Cumulative Totals		
Nov. 21, 1968	3,368,124	1,099,334
Nov. 21, 1967	3,409,168	1,105,725

FREIGHT-TRAIN CARS

• *Masonite Corp.*—Leased 75 60-ft, 70-ton box cars from United States Railway Equipment Co., a subsidiary of Evans Products. Cars are equipped with Evans Air-Pak bulkhead and Hydra-Cushion underframe.

• *Missouri Pacific.*—Will order an additional 900 freight cars at a cost of about $15.4 million, as part of a 1969 power/equipment program which now involves expenditures of more than $40 million. MP previously announced authorization for 24 diesel-electric units and 861 freight cars (RA, Sept. 23, p. 111). New authorizations cover 200 100-ton, 60-ft box cars; 150 70-ton, 50½-ft box cars; 200 100-ton covered hopper cars; 200 100-ton, 52½-ft gondolas; 100 100-ton covered gondolas; and 50 100-ton coil cars equipped with lift-off covers. All cars will be equipped with roller-bearing trucks; all box cars will be equipped with cushioning devices and load-restraining devices.

• *Trailer Train.*—Placed orders for an additional 198 cars as follows: From Bethlehem, 50 89-ft, 4-in. standard levels; from Pullman-Standard, 50 89-ft, 4-in. standard levels, 50 89-ft, 4-in. container cars, 25 89-ft, 4-in. all-purpose cars; and 23 60-ft flats. This brings new orders placed by Trailer Train since Jan. 1 to 5,590. On Dec. 2, TTX had 48,652 cars in service or on order.

NEW FACILITIES

• *Seaboard Coast Line.*—Will begin a $1.9-million expansion program at its Uceta shops in Tampa, Fla., in 1969. Upon completion in early 1970, the new facility will handle all Tampa-area diesel locomotive repair work (now being performed at the Gary shops of the former Seaboard Air Line). The 10-acre Gary property will become available for industrial development. The expansion program will include construction of two 350-ft tracks in the present shop on structural steel supports above inspection pits. More than four miles of new tracks will be built in the shop area, providing access to sanding and fueling facilities to be built just west of the shop and to locomotive washing facilities there. New anti-pollution control equipment will be installed.

• *Southern Pacific.*—Ordered three sets of CY cab signal equipment from the Signal & Communications Division of WABCO for installation in hump locomotive units at Eugene, Ore., Yard.

LOCOMOTIVES

• *Pennsylvania-Reading Seashore Lines.*—Ordered five 2,000-hp diesel-electric freight locomotives from Electro-Motive for delivery during the first quarter of 1969.

YOU OUGHT TO KNOW

IC commuters satisfied—their association folds

Illinois Central commuters don't yet have new cars to ride in—but apparently they're satisfied that things are getting better, because the two-year-old IC Commuters Association is going out of business. A spokesman for ICCA said the group has accomplished a number of its objectives—things like getting improved schedules, upgraded station facilities, safety glass in car windows—and that members of the ex-ICCA will now be looking forward to hoped-for installation of new equipment in 1970.

Perlman named Man-of-the-Year by fraternity

Sigma Alpha Mu's Man of the Year is Penn Central's President Alfred E. Perlman. The fraternity's award, presented annually, cites Perlman as "a builder and rebuilder of railroads who has been successfully meeting new challenges following the merger February 1 of America's two greatest railroads."

"Best-read" citation goes to CB&Q ad

Out of the many thousands of ads that have appeared this year in all media throughout the country, 400 have been rated as tops in the "best-read" department. And right in there with the best of them is a car-tracing ad of the Chicago, Burlington & Quincy. Prepared by the Tatham-Laird & Kudner agency, the winning ad pictures the world as it looks from outer space and carries this message: "We're moving 40,166 freight cars down there. We know where each one is. Right now." The 400 ads, selected by Daniel Starch and Staff, will be published in book form by Corinthian Editions, Inc.

New decline reported in employment

Total employment on Class I railroads dropped 2.13% in October from the same 1967 month, and 1.12% from the September figure, the ICC says. Hardest hit was the group of transportation employees other than train, engine and yard men—they dropped to 49,698, 9.74% less than a year ago and 2.06% less than September. The biggest gainer was the executive, official and staff assistant group—15,902 in October, up 2.36% from 1967 and .67% from September. Professional, clerical and general employees dropped 2.43% from a year ago and .48% from September to 126,004. Maintenance of equipment and stores personnel dropped 2.56% from last year, and maintenance of way and structures workers decreased by 1.28%.

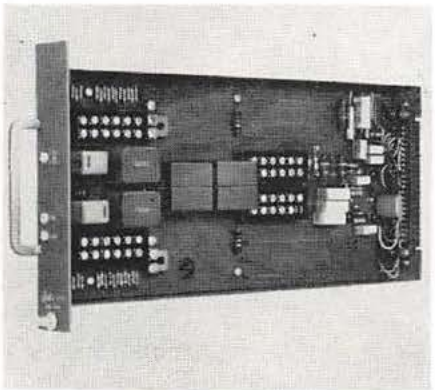
Airlines plan big purchase of containers

Airlines will purchase 10,000 air-cargo aluminum containers for use on Boeing 747 Superjets, first of the jumbo jetliners, says President Najeeb E. Halaby of Pan American World Airways. The 747's are due to enter service late next year. And this will be just a beginning, said Halaby: "Hard on the heels of the 747 will come other jumbo jets. The 1011 and DC 10 will both be 300-passenger planes while the mammoth Lockheed Georgia L-500 freighter will be capable of swallowing 300,000 pounds of cargo in a single gulp." All of the containers purchased by the airlines will be interchangeable with surface carriers said Halaby. By 1975, he forecast, "there should be substantial potential for the door-to-door container concept."

From N&W to the Smithsonian: A fond memory

The Norfolk & Western, the last major railroad to abandon steam power, has presented to the Smithsonian Institution a model of the last steam locomotive built in the U.S. Accepted for display in the Smithsonian's Museum of History and Technology, the model is a copy of an Sla class steam switch engine built at N&W's Roanoke, Va., shops in 1953. The engine entered service Dec. 10, 1953 and was retired nearly five years later. The model was built by H. Clarkson & Son of York, England, on a scale of one-half inch to a foot.

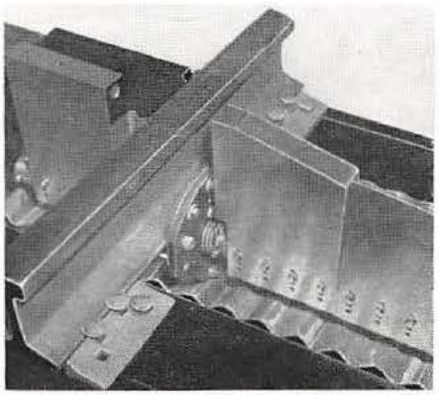
NEW PRODUCTS REPORT



System repeaters (RA-1)

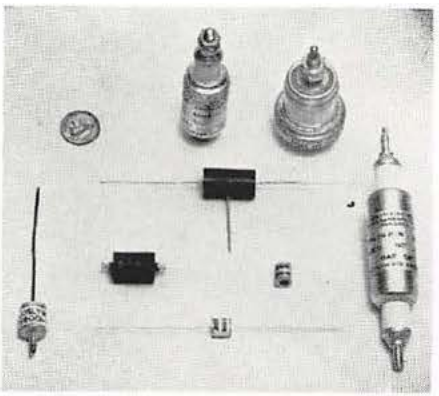
The B410 and B475 system repeaters are now available to provide compatible state-of-the-art repeatering on modern "N" type systems. Two repeater amplifiers were developed for use with a common line-terminating unit. The two alternates are designated B410 ("N2") system repeater and the B475 ("N3") system repeater. Either may be used on any "N" compatible repeatered system but each has its particular application. The B410 system repeater gives adequate performance on less demanding applications. The B475 System Repeater is recommended for all B475 and B450 ("ON") applications, as well as for all longer "N-Repeatered Lines." Its design enables the use of as many as 40 repeaters in tandem, on lines up to 200 miles long. Stability is provided by silicon transistors that are less susceptible to fluctuations in ambient temperature. Screwdriver adjustment is used for: field adjustments, receive span-pad-loss strapping, and voltage regulator strapping.

The B475 repeater uses four types of equalizers to normalize the frequency response irregularities of cable. *Lynch Communication System.*



Drag detector (RA-2)

Scanning critical areas left open by other types of detectors is an important feature of a new dragging-equipment detector. It features electronic circuits that are interlocked to differentiate between dragging equipment and wheels. The detector is attached directly to the rails by insulated clamps. When the rails are deflected by a train the detector will move with the rails. The detector is self-restoring and can be used for main line or yard service. *Wheel Checkers.*



Spark gaps (RA-3)

A new series of precision spark gaps has voltage breakdown capacity ranging from 450 volts to 1500 volts. Types 2009-01 through 2009-04 are designed to protect sensitive components in communications systems, countermeasures devices, antenna networks, and modulators. Maximum surge current handling capability of the complete line ranges from 10,000 amps to 40,000 amps. Included in the line are devices which employ the rotating arc principle. *Joslyn Electronic Systems.*

Car retarder (RA-4)

A new electro-pneumatic car retarder is designed to provide increased braking capability with reduced maintenance problems. The model 67 retarder has the same retardation capability when handling 160 ton cars as the model 32 retarder had to control 100 ton cars. Design changes consist of all-welded levers, beams and supports, utilizing a corrosion-resistant steel. These units are completely interchangeable with the castings used on previous models. *WABCO Signal & Communications Div.*

Relay (RA-5)

The subminiature HGR2MT is a high-speed mercury-wetted contact relay designed for low-level switching applications. Available with "common open time" characteristics, the relay is designed for applications which make use of the "capacitor transfer" analog multiplexing technique. This module combines sensitive, high-speed operation with a small-sized, low-profile enclosure for extremely compact printed circuit board mounting. *C. P. Clare & Co.*

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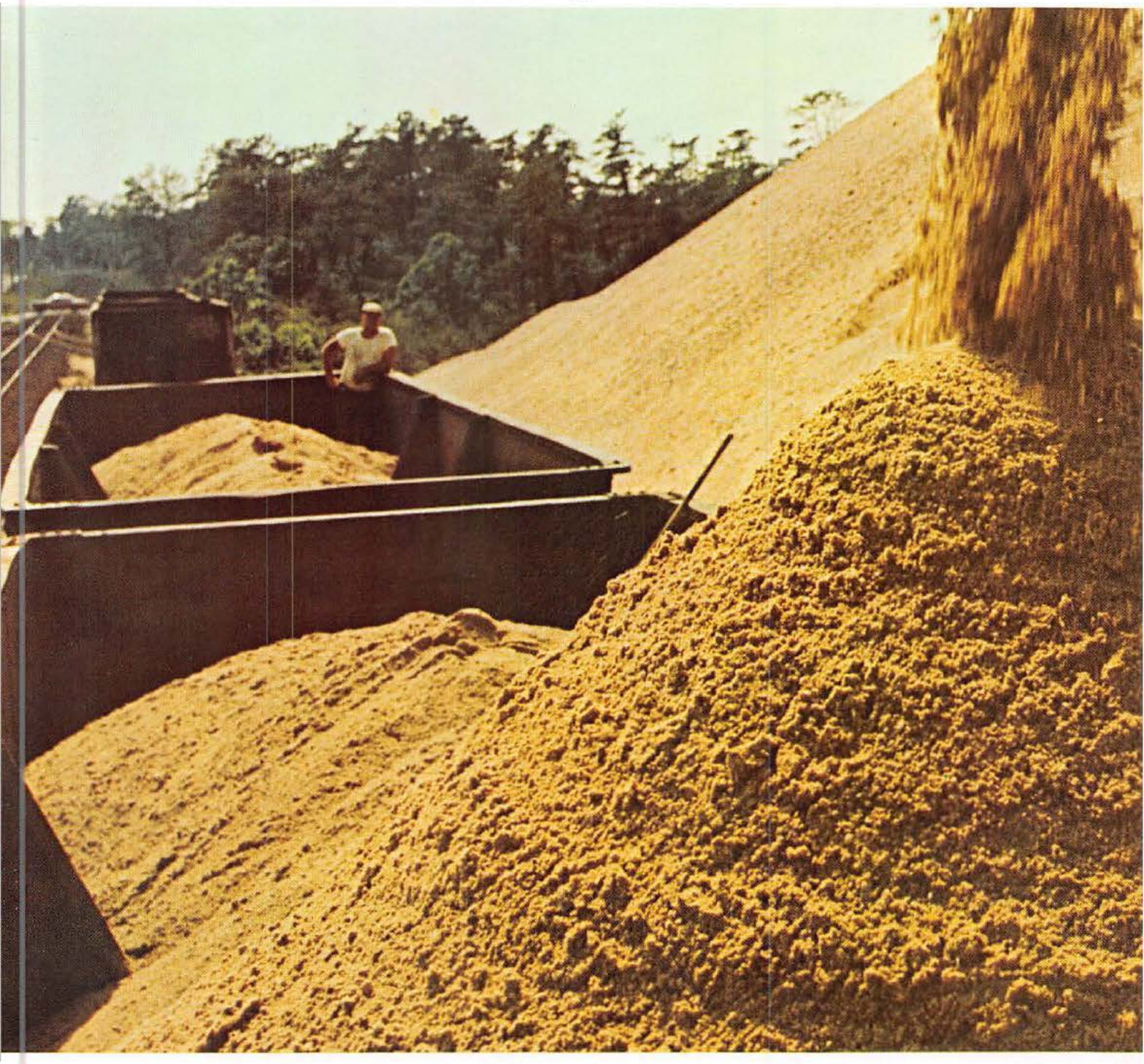

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ICC keeps busy as '68 draws to a close

About a dozen problems await the Commission's adjudication.

By FRANK MALONE, Washington Editor

Should merger of Norfolk & Western and Chesapeake & Ohio be permitted? Does the Interstate Commerce Commission have statutory power to enforce what it calls inadequate standards for rail passenger service? Will the Commission keep using fully-distributed costs as its base for determining the lowest-cost carrier in intermodal competition?

These are the major rail-related questions among a dozen awaiting ICC answers as 1968 moves off the calendar. Estimates on arrival of the first answer vary from early January to late February. The second answer may come within one week to five weeks. When the third issue will be settled is anybody's guess. But no matter which way the answers go, their impact on the rail industry will be enormous, and ICC seems fully impressed with the size of the issues.

Right behind these three in importance is the dirty-car question: Do railroads have the right to fine shippers and receivers who fail to clean the cars they use? Also on the ICC scorecard are three other mergers, per diem and demurrage rules, actual passenger-service costs, minimum weights for covered hoppers, TOFC mixture rules, and division of inter-territory revenues.

- **N&W-C&O report soon.** It now looks like the report of ICC Examiner Edward L. Boisseree on the N&W-C&O merger will come soon after Jan. 1. Previously, it was expected before the end of this year.

In this case the major issues seem to be settled already. The conditions suggested by the Department of Justice have been accepted by the railroads. The railroads accepted with reluctance over "additional heavy burdens," but with determination to meet new competition from the Penn Central.

Justice said the Commission should keep jurisdiction over the merged railroads for ten years to determine whether there should be an eventual relinquishing of former Wabash lines west of the Mississippi River. Secondly, Justice said the ICC should require a promise from the new system to keep operating the five smaller lines to be included, even if any of them go bankrupt. Finally, the Commission should get N&W-C&O assurance of competitive freight service to and from the state of Maine.

One of the main things Examiner Boisseree is considering is the future status of the Reading. The railroad supports the merger, but not accompanying plans for inserting Reading as a controlled subsidiary of a new holding company, Dereco. Reading wants its properties merged with the other railroads in the system, under terms equitable to its shareholders.

- **How far can ICC go?** In another significant issue, the ICC is expected to decide whether it has the same authority to order adequate service for passenger movment as it does for freight. The full Commission now is weighing the recommendation of Examiner John S. Messer that it assume greater passenger service jurisdiction because it has authority to do so under provisions of Section 1 of the Interstate Commerce Act.

Messer's specific proposals for standards include full meals on trains covering more than 250 miles, sleeping accommodations on trains running between 10 p.m. and 8 a.m., diner-lounge cars on trains in transit 12 or more hours, average passenger-train speeds equal to those of the fastest freight trains and clean cars with heating and cooling systems that really work. Messer calls for a national rail passenger system "capable of meeting present and future intercity rail transportation requirements."

- **What about out-of-pocket costs?** In determining which carrier in a competitive-rate case has the "inherent advantage" from low costs, should the ICC consider just fully-distributed costs? Railroads say no, that the only true test is whether proposed rates exceed a carrier's out-of-pocket costs and compensate enough to improve net income. But ICC seems bent on ending the six-year-old cost-evidence case by adopting the Oct. 10, 1966 report of Examiner J. S. Kaplan advising adherence to the full-cost basis.

Rails want the case re-opened so they can present new arguments for consideration of out-of-pocket costs. Cost evidence must be tailored to different operating and service conditions, they say. At stake is permanent ICC policy for settling competitive-rate cases. An example of where that policy would be used is the Ingot Molds case in which the Supreme Court upheld an ICC ban on reduced railroad rates in a bid to gain ingot molds shipments from truck-water routes. Rails interpret the court ruling as temporary only. The Court wants ICC once and for all to establish clear rules for cost-evidence, and out-of-pocket costs aren't excluded, railroads argue.

- **Can rails charge for dirty cars?** In an effort to improve car supply and cut switching expenses, railroads are seeking ICC permission to charge shippers and customers $25 for a car that comes back with so many leftovers that it has to be cleaned before another customer can use it. Following the unfavorable report of Examiner William J. Sweeney, the Commission in August ruled against the proposed fines. Then the ICC decided to reexamine the issue as a matter of general transportation importance.
- **Other issues.** In progress at ICC are hearings on the Illinois Central-Gulf, Mobile & Ohio merger. For two other mergers, Milwaukee-Chicago & North Western and Rock Island with either North Western or Union Pacific, examiners' reports are awaited.

The Commission is investigating a proposal for raising minimum weights of grain loadings in rail-owned or-leased covered hoppers. ICC has suspended a tariff that would have imposed minimum weights based on the cars' marked capacity.

Also hanging is a proposed new ICC method for setting per-diem charges based on mileage as well as time. Because of court actions brought against the proposal by railroads, the effective date of the order has been postponed. In its investigation of proposed changes in the average demurrage agreement of railroads, ICC will finish taking requests for cross examination Dec. 18. Hearings will begin Jan. 7.

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U.S. papers win awards at Pan Am Rail Congress

Out of hundreds of papers submitted to the XII Pan American Railway Congress in Buenos Aires, eight by U.S. authors won major awards.

Two prizes—the silver Enrique Chanourdie medal and the Astarsa cash award—went to three Southern Pacific officers for their paper on "The Future of Railroad Electrification in the United States." The authors were Paul V. Garin, assistant chief mechanical officer, engineering; W. R. O'Neill, assistant to chief mechanical officer, system; and G. B. Adams, research engineer.

Four other cash awards went to U.S. writers:

Howard C. Meacham, Jr., research engineer for Battelle Memorial Institute, won the Cometarsa award for his paper on "Vehicle-Track Dynamics: Modern Techniques for Solving Today's Problems."

The Transport Collective Company award went to W. L. Paul, assistant director of cost analysis and research, Santa Fe, for his paper on "Containerization: Concepts and Research on the Santa Fe."

M. M. Scanlan, Great Northern's vice president, marketing, won the Olivette award for his paper on "U.S. Railroad Marketing—Real Change or Hoopla?"

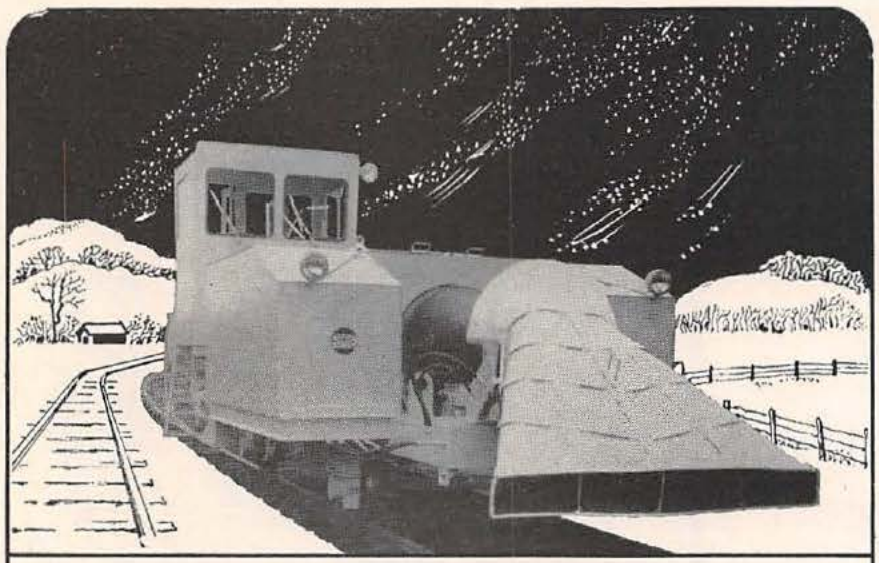
The Nife award was presented to Dr. Paul M. Zeis, director of research for the Norfolk & Western. His winning paper was "Competitive Rate Making in the United States."

For his paper on "The Battle for Return on Assets," Robert P. Neuschel, director of McKinsey & Co., received a ribbon of the delegation of Mexico.

George R. Clinkenbeard, director of transportation quality control for the Frisco, and Martin M. Pomphrey, assistant to the president of Frisco, won an honorable mention award for their joint paper, "Quality Control—an Arm of Proper Freight Car Utilization."

A special mention went to James A. Caywood, vice president of DeLeuw, Cather & Co., for his paper, "Why Clean Ballast."

Altogether, U.S. authors submitted a total of 58 papers to the Congress, which was held in November in the Argentine capital. ■



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PEOPLE IN THE NEWS

CLINCHFIELD.—Glenn C. Starr, general freight agent, Erwin, Tenn., retired Nov. 27, after over 49 years of service.

DELAWARE & HUDSON.—W. D. Slater, division engineer, **Erie Lackawanna,** Marion, Ohio, appointed engineer maintenance of way, Albany, N.Y., succeeding **Bruce W. Nyland,** resigned to become assistant engineer maintenance of way, E-L, Scranton, Pa.

ERIE LACKAWANNA.—Clifford A. Redanz appointed trainmaster, New York Division, Hoboken, N.J.

GREAT NORTHERN.—Paul L. Wood named assistant to the superintendent of dining cars.

ILLINOIS CENTRAL.—John W. Ingram, assistant vice president marketing research, named vice president-marketing.

NORTHERN PACIFIC.— W. A. Marshall, purchasing agent, St. Paul, Minn., promoted to director of purchases and stores, succeeding **W. K. Smallridge,** who retired Dec. 1, after 45 years with the NP.

SANTA FE.—Rodney E. Wilson appointed assistant to superintendent of transportation, Chicago, to succeed **Cloyd F. Stanford,** retired.

SUPPLY TRADE

Barrie T. Smith, manager of advertising, **L. B. Foster Co.,** Pittsburgh, has been appointed manager of marketing, Central Region, Chicago.

G. W. Heble, manager of data processing, **Electro-Motive Divsion, General Motors Corp.,** has been promoted to director of systems and data processing, succeeding **Richard R. Parks,** who has been advanced to manufacturing manager, **AC Electronic Division.**

Joseph J. Stein has joined **De Leuw, Cather & Co.,** Chicago, as transportation consultant. Mr. Stein was formerly vice president—operations, Chicago & North Western; vice president and senior vice president, Monon; president, Indiana Creosoting Co.; and president, Monon Transportation Co.

OBITUARY

Charles E. Adams. 77, former superintendent and chief engineer, **Long Island,** died Nov. 27 at the Berkshire Nursing Home, West Babylon, L.I.

W. J. Joy, 60, executive secretary, **Railway Engineering—Maintenance Suppliers Association,** with offices at Chicago, died on Dec. 9.

Millard A. Pinney, assistant vice president-engineering tests, **Keystone Railway Equipment Co.,** died Nov. 19.

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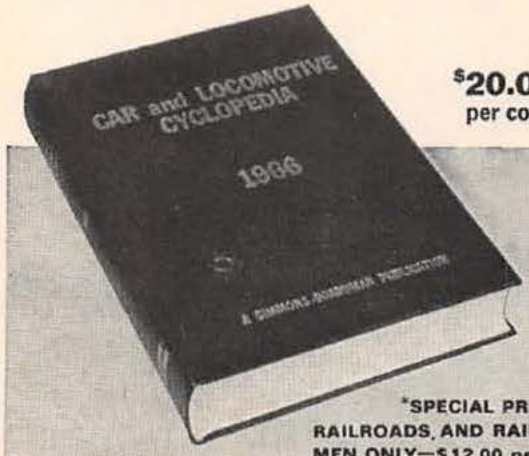

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VIEWPOINT

Mr. Nixon selects a highway man for DOT

One question was uppermost in the minds of railroad men (and, no doubt, a lot of other transportation people) as President-elect Nixon picked Massachusetts Gov. John A. Volpe to head the Department of Transportation. It was this:

With a highway man in the driver's seat, will the center of gravity at DOT begin to shift toward concrete and rubber?

The answer, we suggest, is "No."

Granted, Governor Volpe's major past experience at the national level was as Federal Highway Administrator in the Eisenhower Administration. Granted, he was an important architect of the Federal Highway Act of 1956. Granted, he supervised the development of a master plan of urban highway construction for the State of Massachusetts.

Given all of this, there are several factors which should hearten those who share the feeling implicit in the recent comment of the present DOT secretary, Alan S. Boyd: "We've got a bucketful of money for highways and only a medicine dropperful for the rest."

(1) It is reasonable to assume that a man with such strong ties to the highway industry will be especially mindful, now, of the need not to show favoritism.

(2) All who have been associated with Governor Volpe report him to be a man of the highest integrity, not easily responsive to any pressures except what he conceives to be the public good.

And (3) who better knows the folly of a lopsided dependence on any single mode than a man who's been the route? Alan Boyd himself was a former chairman of the Civil Aeronautics Board. But any airline man will tell you, somewhat plaintively, that he hasn't exactly championed the airlines against the other modes.

Governor Volpe's appointment was announced on Dec. 11, three days after his 60th birthday. We heartily and hopefully wish him—and the transportation industry about whose future he will have so much to say—many, many happy returns.

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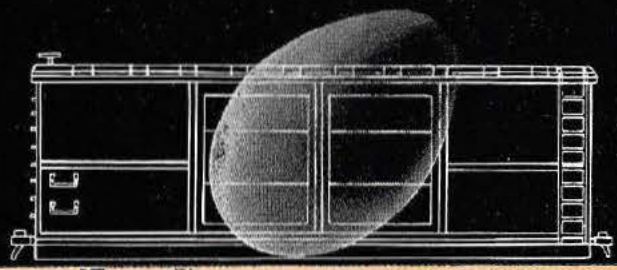

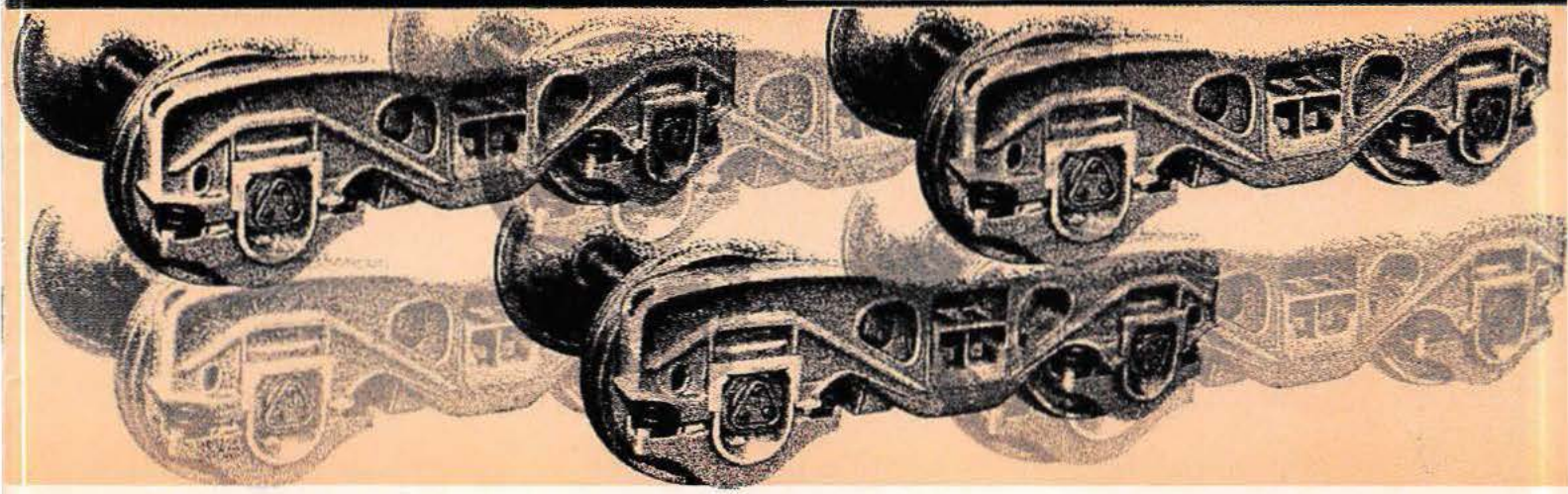

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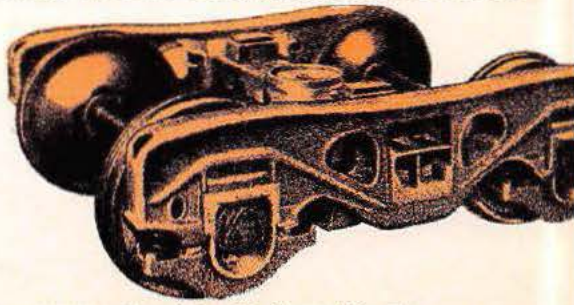

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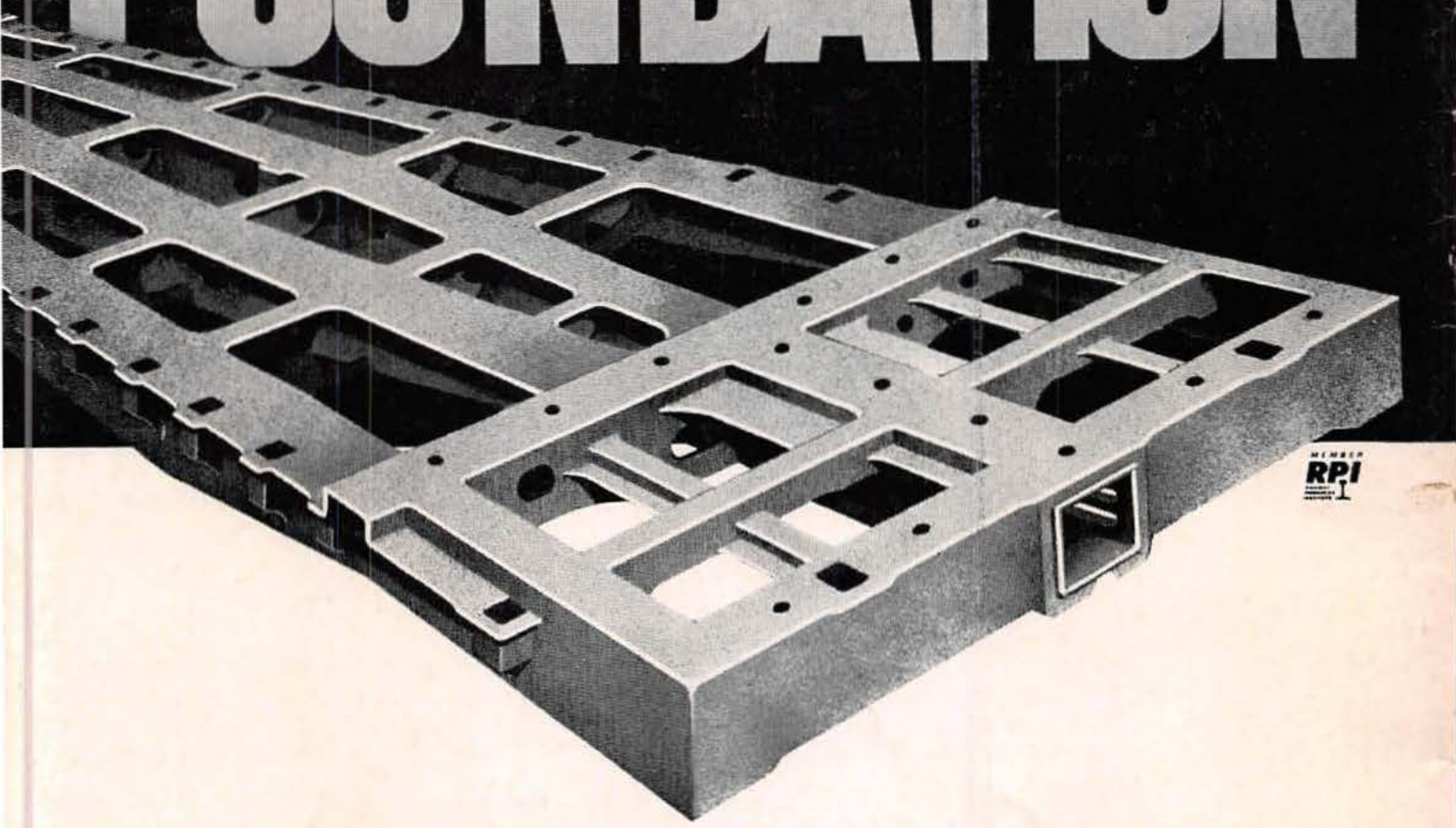

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